ProFouND: Prevention of Falls Network for Dissemination

DELIVERABLES D 6.1 & D6.2

D6.1 Core standardised dataset

D6.2 Protocols for standard data collection

Document Type:	Deliverable
Dissemination Level:	PU
Editor:	UNIMAN
Document state:	Draft
Document version:	1.1
Contributing Partners:	UNIMAN plus all others
Contributing WPs:	WP6
Estimated P/M (if applicable):	
Date of Completion:	09/04/2014
Date of Delivery to EC:	09/04/2014
Number of Pages:	50

Introduction and overview.
ProFouND proposes to bring about change across Europe by influencing policy and practice so as to improve the uptake of evidence based falls prevention interventions and change knowledge and attitudes towards falls and their prevention whilst using novel ICT solutions.

As part of the work of ProFouND the amended Description of Work (DoW) proposes setting up monitoring systems to identify whether there is change in falls incidence and in service provision. This document reports on two deliverables aiming at setting up systems to monitor progress in falls prevention in EU regions as part of the EIP goal.

DoW Deliverables

D6.1	Core standardised data set: Core standardised data set on protocol for standard data collection from administrative databases. Email consultation with stakeholders across the EU.
D6.2	Protocol for bespoke data collection on process data to monitor changes over time, process measures.

There are already core data set consensus statements for falls and injury incidence in the literature from the EUNESE and ProFaNE groups (EUNESE 2006, Hauer et al 2006, Lamb et al 2007, Schwenk et al 2012). Ongoing work by the FARSEEING consortium has agreed metadata sets as they relate to ICT based fall interventions (Klenk et al 2013) and a taxonomy to describe interventions (http://farseeingresearch.eu/resources/taxonomy/). By 2015 it is intended to have an EU-wide monitoring system with substantive contributions to the Joint Action on Monitoring Injury in Europe (JAMIE), using the IDB protocol (Rogmans, 2012; http://man301110a.decipher.uk.net/en/content/cms/research/research-projects/jamie-joint-action/). These have been used to provide a framework for defining the ProFouND core datasets. As part of Task 6.1 partners have been asked to identify local data which are routinely collected and easily accessible. We have then used online survey and consensus techniques to generate a consensus on what is available in our partner regions. Thus the consensus process takes into account practical considerations on top of scientific ones. At inception we foresaw two datasets; if data were available we suggested that as well as the core falls and injury incidence data, core data would include process variables describing services provided, numbers of persons seen/treated by services, and cost and quality of life variables. However, as it turned out such process data will need to be collected as part of a bespoke dataset collection focusing on process, since such process data are not routinely collected in useful ways across partner regions. It should be pointed out our approach has differed to the work of the EIP-AHA Action Group 2 although they are aligned. For ProFouND the aim is to identify a core dataset immediately available from records in our partner regions. For the EIP-AHA the aim has been to define an ideal type data set, defining data that should be collected rather than is being collected. Our work differs from that of E-NOFALLS as they have focused on ICT available and where it is being used, whereas ProFouND is focusing in this document on deliverables related to fall incidence monitoring, and ways of identifying changes in service provision.

As well as agreeing core data sets we need to develop methods to bring together, collate and merge the data from different datasets, which have been collected in different countries or regions potentially using different definitions, protocols, and database architecture. This work commenced in parallel to Task 6.1, and requires identification of the databases of interest in each participating region, requesting information about structure and content, and identifying methods for data merger. We will aim to collect standard and comparable data on falls and injuries. Our aim was also, if possible to collect data on service provision, costs, and quality of life parameters from existing routine data held in participating regions/countries. However, as it turned out usable data in these

domains are meagre or non-existent and we will not be able to pursue these meaningfully without specialist prospective data collection which is not resources within ProFouND. In order to identify data a template questionnaire was circulated to all partners and participating centres requesting information on existing data bases in each country and region. Based on this we have been able to define the core dataset, so as to finalise the methods of data collection and merger using routine and administrative data bases in participating centres. However, it has to be said that the available data are sparse, and the variables routinely collected in most partner regions is restricted in number (see below). In order to collect data on more than the most basic of fall related variables, (e.g. that a fall has occurred (incidence), age, gender, residence of faller, hospital admission, injury data, length of hospital stay, death) it is clear that bespoke data collection would be required, requesting services to give specific data beyond that collected routinely.

It was always clear to us that not all data of interest would be available from routine and administrative data collected in participating regions. We thus proposed as Task 6.3 to design protocols for bespoke or prospective data collection and to explore in which centres/regions these data could be collected. We thus designed a specific survey instrument to be administered in participating regions/countries to collect requisite data to monitor process and in due course will add outcome variables that are not routinely collected administratively in participating centres. The protocol designed is being implemented as Task 6.4 in order to collect baseline data reflecting falls services. These baseline data will be collected for the period preceding implementation of the interventions to be produced by WP4 & WP5. Although use of routine administrative data is has advantages as such large datasets normally go back over a number of years and permit comparison over time to identify changes related to implementation of interventions, the use of routine data also has disadvantages, not least that the original data are not collected for the purpose to which we intend to put them, may be of questionable quality and completeness, and most problematically collected using disparate protocols and not following the rigorous research quality protocols we might prefer. Thus we will also attempt to implement limited prospective data collection in participating centres, specifically designed for the project to permit us to monitor and evaluate process changes. We originally also proposed, that we may require a centre that does not have good data on falls incidence amongst target groups to undertake a cross sectional survey, or incidence study, to provide the requisite baseline data. It turns out from our survey work and searches that we would need to implement such a survey across, nearly all our participating centres and thus we designed a study to do this. However, after discussion with the project advisory committee we have decided NOT to implement this survey as (1) It was never in the DoW or original B2 proposal to create ProFouND (2) we are not resourced to undertake such a piece of work and doing so when poorly resources is likely to result in work of questionable scientific quality and (3) undertaking a cross sectional epidemiological study would detract from the core work of implementing change amongst our partners. The epidemiological protocol devised is thus not presented herein.

Below we present

The methodology of how we agreed our dataset, the agreed dataset, and protocols for collecting a core data set based on routinely available data for falls and falls injury which can be collected across the localities and countries where the ProFouND project is likely to have a direct impact. (Agreed dataset = D6.1 and Protocol for data collection= D6.2 See Section 1 below)

Protocols for the collection of process data on service provision using a specifically designed cross sectional survey method (D6.2) See Section 2 below.

Methods by which we can collect follow up data on falls and falls injuries and service provision from the same sites to estimate change from baseline. (To be reported in period 2)

Section 1

Protocol:

Falls monitoring using routine datasets available from partners

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European Falls and Injury Data: Potential measures of the impact of the ProFouND project on the incidence of falls in participating regions of Europe using routine datasets.

Background

Falls are an important public health issue. It is generally accepted that each year, 35% of over-65s experience one or more falls with about 45% of people aged over 80 who live in the community falling each year. Between 10 and 25% of such fallers will sustain a serious injury (DH, 2009). This has implications in terms of independence, quality of life and also cost to health services. Hip fracture is the most common serious injury related to falls in older people and death rates are rising (Centers for Disease Control and Prevention, 2010). Each year approximately 10% of the elderly population (65+) will be treated by a doctor for an injury and approximately 100,000 older people in the EU27 and EEA countries will die from injury from a fall each year (Eurosafe, 2013).

The Prevention of Falls Network for Dissemination (ProFouND) is an EC funded initiative dedicated to bring about the dissemination and implementation of best practice in falls prevention across Europe. ProFouND comprises 21 partners from 12 countries, with associate members from a further 10 countries. ProFouND aims to influence policy to increase awareness of falls and innovative prevention programmes amongst health and social care authorities, the commercial sector, NGOs and the general public so as to facilitate communities of interest and disseminate the work of the network to target groups across EU. ProFouND's aim is to increase the delivery of evidence based practice in falls prevention and therefore reduce the numbers of falls and injurious falls experienced by older adults across Europe. However, the project's main focus will be to have a particular impact within the regions represented by partners and associate members. We aim therefore to investigate the impact and effectiveness of the project, by collecting baseline and follow up falls data in regions participating in ProFouND, and if feasible matched regions not participating.

Aims and objectives

Our aim is to create and implement systematic and comparable data collection systems which can provide objective measures of the impact and return on investment from prevention measures carried out under the auspices of the ProFouND network.

The objectives are:

- To agree a core data set based on routinely available data for falls and falls injury which can be collected across the localities and countries where the ProFouND project is likely to have a direct impact. (Agreed dataset = D6.1 See below)
- To collect baseline data on falls and falls injuries using the agreed routinely available core data from sites/localities participating in ProFouND and from comparison sites not participating. (Protocol = D6.2 below)
- To collect follow up data on falls and falls injuries from the same sites following baseline. (To be reported in future report)
- To undertake pooling and analysis of datasets to provide trend data on falls and falls injuries from before and throughthe project period to permit analysis of secular changes and compare changes observed in participating sites with those in control sites. (To be reported in future report)

Methods

Design

We adopted a fully quantitative approach collecting data from both existing and easily available quantitative datasets on falls and fracture injury. These data will enable us to analyse patterns and trends across localities and countries, and potentially enables us to develop more sophisticated

analytical and predictive tools (see e.g. NHS England and the Health and Social Care Information Centre, 2013).

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Sampling principles and procedures

We contacted our 21 partners and 8 Associate partners and asked them to identify datasets for us, or to identify colleagues who can assist us in accessing data/data collection. A scoping survey had already been completed by partners within the network, where they have told us about the types of datasets and data parameters that are available in their countries/localities. The survey parameters were initially based on the Injury Database (IDB), the JAMIE project (Eurosafe, 2013), the ProFane taxonomy (ProFane, 2011) and Hospital Episode data (HES, Health and Social Care Information Centre, 2013). This has then enabled us to agree a final core dataset that majority of countries/localities can populate. Full consent will be gained to access the data and each local areas research governance frameworks will be followed. All datasets will be anonymised before being shared with us and patient identifiable data will not be shared. Ethical approval has been obtained from the University of Manchester Research Ethics Committee.

Data Collection Methods

Data collection will take place at two points, at baseline (April-July 2014) and then at Months 33-34, nearing the end of the project. Data will be collected through a secure data portal where colleagues can upload anonymised datasets.

The parameters collected will be from the following areas (further detail in Appendix 1):
Demographics
Patient History
Description of fall
Treatment/Intervention

The parameters have been selected based on what is available across the majority of the countries/localities involved in the network.

Data Management

All data collected during this study will comply with the Data Protection Act (1998) and EU data trnasfer regulations. Electronic datasets will be password protected on the network and be in an anonymous format. Data will be shared through a secure server and up loaded onto a portal on the ProFouND website and stored into a secure encrypted dropbox. The software used for the has safety features inbuilt to ensure anonymity and data security. The software and data will then be held on centrally-supported University of Manchester servers in secured server rooms. There is virtually no chance of unauthorised access physically to these data. Through the network, all servers are fully patched and secured by a security team at the University. Only members of the University of Manchester team will have access to the data once it is uploaded and any corrections to already uploaded will have to be made by them.

Data analysis

When the quantitative measures are collected, they will be checked for missing data and the data will be entered onto SPSS. Quantitative data will be analysed using SPSS Release 19.0 or above and will include analysis of trend as well as bivariate and multivariate analysis. Issues with the way the data has been collected and coded will have to be considered during data pooling and analysis, as previous studies have already identified this as a potential issue (EUNESE, 2006). However, it is hoped that the majority of these issues will have been resolved before data collection.

Dissemination of findings

It is anticipated that the findings from this study will be published in a peer-reviewed journal. However, we hope that the findings from this study have a wider impact across Europe. Not only will we evidence the impact of the network, a reduction in falls and fracture rates (or even if there was a plateau in rapidly growing rates) would also evidence effective change in practice. This has the potential to influence other areas in Europe and to influence both local and wider European change and policy. However, less than a three year period is a short timescale to evidence change and to fully implement change in practice. Therefore, it is hoped that we can also set up sustainable systems for data collection in the future. As some of the parameters are synonymous with the IDB we will also be able to arrange data sharing which means that the IDB has wider representation across Europe. This data collection will also inform the work of the European Innovation Partnership on Active and Healthy Ageing (EIP-AHA) and their deliverable D2.2. Although our data collection is designed to meet the needs of our network, collaboration with the EIP-AHA means that our core data set has the potential to fit within the EIP-AHA's wider data collection.

Ethical issues

All participating centres will be provided with full study information and will themselves provide consent online by ticking a box through the website before uploading data. All data will be anonymised and approval has been obtained from University of Manchester Ethics Committee, on the basis that participating centres will check local arrangements for shariing anonymised data. All data will be anonymised before being uploaded and analysed and will follow the risk management and governance guidelines of each institution.

Results

The survey portal was open 1/10-31/12/14. In total 64 responses were made, not all of which were valid as clearly some visits to the site were by individuals from organisations seeking to identify what they were required to provide before subsequently completing the data. For the purposes of the analysis we therefore collated information to represent regional/partner completion. All but 4 partners provided complete data, which was reasonable as the 4 partners who did not fill in the consensus were alll technical or non-clinical or with regional overlap (e.g.redundancy in completion). Based on the valid responses we identified which data were normally routinely available. It should be noted thatt not all data were available for all sites; only 2 sites reported that all fields could be completed, although 7 further sites had only one missing field.

<u>Data avaailability</u>:

76% of respondents reported that the history of falls is recorded in the past 12 months
85% of respondents reported that data are collected about medication but only a quarter of these reported the number of medications
90% of respondents reported that there were data on previous attendance at A&E
98% of respondents reported there were data on date of injury
92% of respondents reported there were data on the time and place of injury -
89% of respondents reported there were data on the loss of consciousness
97% of respondents reported there were data on the date of attendance at hospital
92% of respondents reported there were data on the time of attendance at hospital
100% of respondents reported there were data on the body part injured
89% of respondents reported there were data on the number of days admitted to hospital
92% of respondents reported there were data on whether the patient died in hospital within 90 days
78% of respondents reported there were data on the undertaking of multi-factorial risk assessment
86% of respondents reported the provider of the intervention was recorded

Some sites also extra supplied commentaries on their responses by email, and a number of partners also sent us full data specification protocols from their clinical sites. (See appendix 1, examples available on request).

On the basis of these responses we defined the core dataset to be collected by download via ProFouND secure data portal on the website.

Data collection for baseline will be commenced as soon as each partner is able. Anonymised data for at least the 12 month period 01/01/2013 – 31/12/13 will be requested for baseline and if available previous 12 month periods.

Section 2

PROTOCOL

Changes in the delivery of Strength and Balance training for falls prevention across Europe.

Background

Falls are an important public health issue. Each year, 35% of over-65s experience one or more falls. About 45% of people aged over 80 who live in the community fall each year. Between 10 and 25% of such fallers will sustain a serious injury (DH, 2009). This has implications in terms of independence, quality of life and also cost to the health service (DH, 2009). Hip fracture is the most common serious injury related to falls in older people and death rates are continuing to rise (Centers for Disease Control and Prevention, 2010). Each year approximately 10% of the elderly population (65+) will be treated by a doctor for an injury and approximately 100,000 older people in the EU27 and EEA countries will die from injury from a fall (Eurosafe, 2013) .

There is increasing evidence that exercise programmes that include specific strength and balance training can significantly reduce the risk and rate of falls (Gillespie et al, 2012 & 2009; Sherrington et al, 2011 & 2008). Strength and balance training (SBT) has been described as 'carrying out exercise that increase muscle strength in the legs and improve balance' (Yardley et al, 2008: 554). The evidence based FaME and Otago strength and balance exercise programmes are two of the main specific programmes proven to reduce falls in frailer older people (Davis et al, 2009; Sherrington et al, 2008 & 2011; Skelton et al, 2005; Robertson et al, 2001) and are currently the main programmes adopted in the UK (RCP, 2012 p53) and successful training has been carried out with over 2,000 instructors trained in either FaME or Otago.

The Prevention of Falls Network for Dissemination (ProFouND) is a new EC funded initiative dedicated to bring about the dissemination and implementation of best practice in falls prevention across Europe. As part of this project we are working to specially train a cache of instructor's throughout the Europe to deliver evidence based strength and balance programmes based on Otago (with some extra training on FaME approaches) where there is currently little or no provision. The project also intends to give evidence based guidance on the provision of strength and balance programmes and effective exercise pathways for older people, through its website.

The proposed research intends to explore the impact of the ProFouND project on the delivery of evidence based strength and balance programmes for falls prevention and service change across specific areas of Europe.

Research question.

Are there differences in the delivery of strength and balance training for falls prevention in specific areas of Europe over the ProFouND project period (2013-2016)?

Aims and Objectives

Aims.

To evidence the impact of the ProFouND project on positive changes in the delivery of strength and balance for falls prevention.

Objectives

- To establish how specific localities in countries in Europe deliver strength and balance training and if delivery is evidence based.

- To explore the impact of both the evidence based training and evidence based guidance delivered

by the ProFouND project on those specific localities.

- To provide further recommendations to localities and all European countries on how they can deliver effective strength and balance programmes for falls prevention.

Methods to be used

Study design

Overall the research proposed adopts a pre and post intervention design using quantitative methods. This is to help us evaluate the impact of the ProFouND project. Monitoring and evaluation of any programme or intervention is vital to determine whether it works, to help refine programme delivery, and to provide evidence for continuing support of the programme (Rootman et al, 2001).

Sampling principles and procedures

The pre and post intervention design consists of an online quantitative questionnaire which will be sent to service managers delivering strength and balance or falls prevention programmes in localities of European countries where the ProFouND project is likely to have a direct focused impact (Table 1). It will also be sent to partners to identify services locally that may not be undergoing training to act as comparator. As we are interested in service change, recruitment will be purposive and opportunistic. Services who are either going to receive a direct intervention (strength and balance cascade training) or are likely to be influenced by the project will be contacted and asked if they will participate. Partners will also contact local services that are not engaging with the training to establish their current delivery.

Data collection methods.

All ProFouND partners and associate partners will be asked to identify organisations that will be influenced by the project. Additionally, we will work closely with the lead of work package five who will be delivering the cascade training to identify and contact services. The partners will make the initial contact with the organisations and ask them if they are happy to participate in this bespoke data collection. Instructors will be sent a link to a University of Manchester webpage, which will include all participant information and the portal to the questionnaire. Paper questionnaires will be available on request. It may be that services do not have managers with good enough English to complete the survey and partners are then asked if they can translate the questionnaire into their own language for the organisations. The organisations will be asked to complete the survey once at baseline (before the ProFouND project is likely to have an impact, February 2014) and again towards the end of the project (November/December 2015) when we should have seen changes in services and delivery.

<u>Questionnaire Design</u>

The first part of the questionnaire (Appendix) collects demographic information about which organisation and locality the data comes from. It will then establish the services provided and the pathways and referral routes each organisation currently has established. The next section asks about the content of the intervention, what type of exercise is offered (home and/or group), the dose of delivery, content of the sessions, assessments and outcomes and training undertaken to deliver them. The next section then asks about maintenance and what is offered after the sessions provided, are there pathways to other classes. The final section asks about the costs and the skill mix within the service (e.g. how is the team made up, health professionals/exercise instructors). This questionnaire is aimed to follow some of the principles of the Royal College of Physicians (RCP) survey carried out in the UK (RCP, 2012).

Data analysis

When the questionnaires are collected in they will be checked for missing data, the data will be

entered onto SPSS. The survey has been designed carefully in an attempt to avoid missing data. However, missing data is not always avoidable and strategies are in place to deal with its occurrence. A comments box has been added at the end of the questionnaire so that if participants feel that they can't answer or nominate the answer they want then they can explain this. Quantitative data will be analysed using SPSS Release 19.0 and will include mostly univariate and bivariate analysis. We may carry out between group tests. There will be the opportunity to make qualitative comments and framework analysis will be used to assess this data. This is a method being increasingly used in health research (Smith & Firth, 2013). The Framework approach facilitates systematic qualitative analysis and summarises and classifies data within a thematic framework. It provides researchers with a clear, structured process through which they are able to demonstrate the steps in the analysis, the subsequent explanations and applications to policy and practice (Ritchie & Spencer, 1994). QSR International's NVivo 9 qualitative data analysis software (2010) will be used to analyse the data. The validity of the analysis will be checked by returning to the data, once themes have been identified and by a second researcher, who will check samples of analysis.

Probable outputs

Month (months from when this process starts NOT project months)	**Targets**
M1-2 (Jan-Feb 2014)	Ethical approval for proposed study.
M2-4	Data collection using questionnaire (this may be flexible dependent on when training is rolled out in each country)
M4-5	Data pooling and analysis
M5	Report writing and submission of baseline deliverable to the EC.
M14	Interim report on data collection
M22-24	Follow-up data collection
M24-25	Data pooling and analysis
M25-26	Report writing and submission of follow-up deliverable and impact to the EC.

This study will help to monitor the impact of the ProFouND project and assist in the prevention of falls though feedback on the delivery of evidence based practice. This could enable people at risk of falls or who have fallen to sustain preventive, promoting independence and reducing future risk of falls and fractures. This could have an impact on costs associated with hospital admission and social care packages. Encouraging long term sustainability of exercise (particularly group activity) also has the potential to provide wider health and well-being benefits such as providing social inclusion and tackling social isolation. This study will give important information to all European countries about the delivery of strength and balance training in falls interventions and delivery afterwards in the community and therefore could lead to improved maintenance of strength and balance by older adults, helping them to live healthy, active and independent lives for longer.

Ethical issues

Ethical approval has been sought from the University of Manchester Committee on the Ethics of Research on Human Beings. It is unlikely that further European ethical approval will be required as we will ask service managers rather than patients to complete the questionnaire and our ethical advice is this will not require further approvals. Previous discussions with our ethics committee have confirmed that local ethical approval is sufficient, however partners and associates will be asked to confirm this. The population will be service managers, and they are not classed as a vulnerable group. The choice of methods should not lead to any distress as the participants will be answering

closed questions in an online questionnaire. The risks involved in participation in surveys are quite minimal and well under the control of the respondent (Fowler, 1993: 133). Participant information completed online is encrypted and password protected so that only the lead researcher can access it. Service managers may be concerned about comparison with other areas and other provision, however they will be assured their information will remain strictly confidential. They are also part of this study as they are willing to carry out service change and training.

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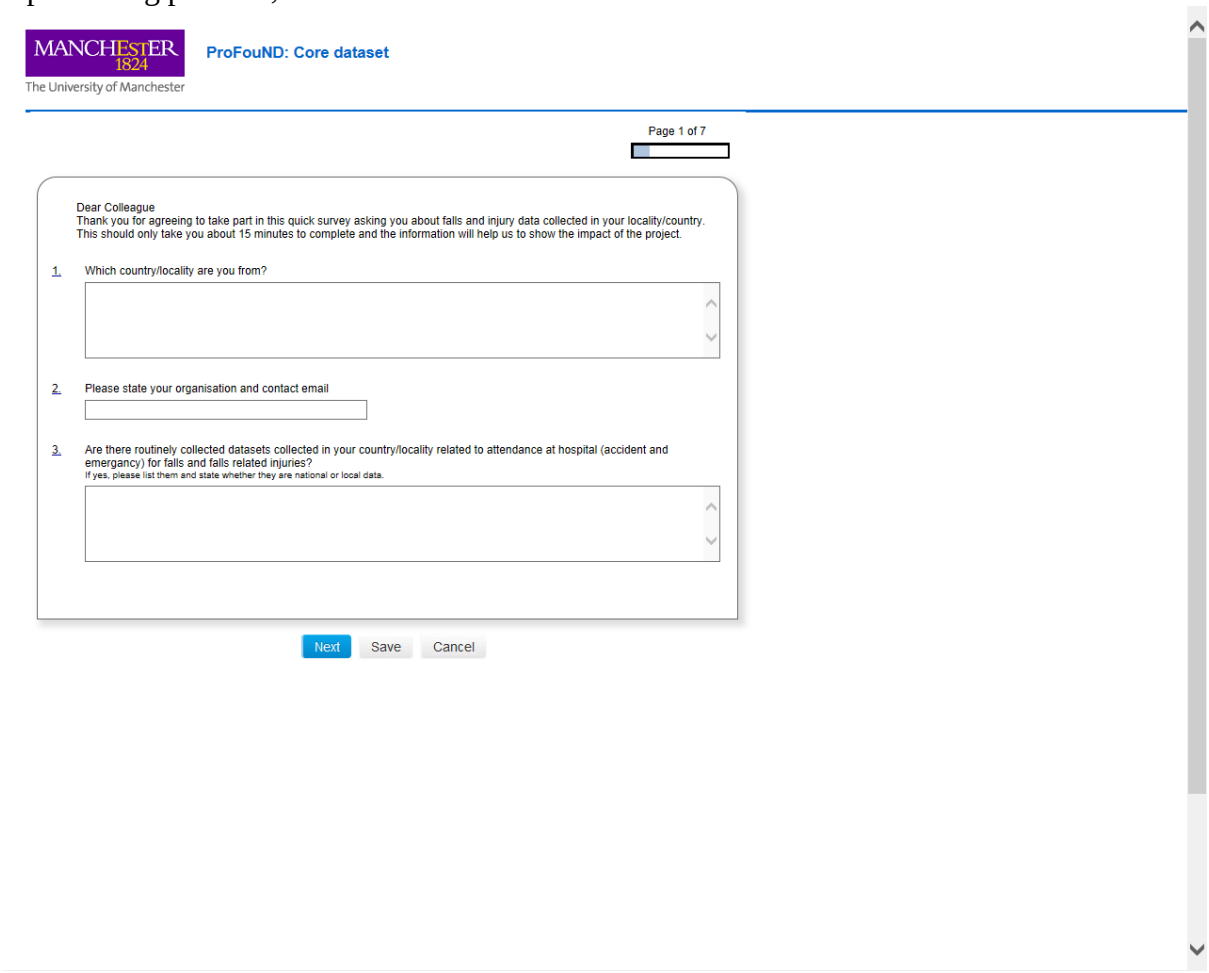
Appendices

Appendix 1

The online survey conducted from 01/11/13-31/01/14 completed by 42 respondents representing partners, associate members and other stakeholders.



ProFouND: Core dataset

Please can you tell us which of the following data it is possible to extract from routinely collected/reported datasets and whether you would be allowed to share this with us. Please do not be concerned if you can only access data on only a few of the categories.

Back | Next | Save | Cancel

DEMOGRAPHICS: Can you easily access the following data from existing databases?

4. Recording country
Yes

5. Locality
Yes

6. Person's country of residence
Yes

7. Patient's age at time of fall/injury
Yes

8. Gender
Yes

9. Ethnicity
Yes

10. If you have answered yes, what categories of ethnicity are used?

11. Place/type of residence
Yes

12. If yes, please state the different categories used

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PATIENT HISTORY: Is the following information recorded?

13. Are the following chronic diseases recorded?
- [ ] Osteoporosis/osteoporotic fractures
- [ ] Parkinson's disease/syndrome
- [ ] Cerebrovascular disorders
- [ ] Eye disorders, visual impairments
- [ ] Dementia, cognitive impairment
- [ ] Depression symptoms
- [ ] Syncope
- [ ] Gait and/or balance impairment
- [ ] Urinary incontinence
- [ ] Diabetes
- [ ] Obesity
- [ ] Respiritory
- [ ] Other, please specify

14. If chronic diseases are recorded can you tell us how they are coded? e.g. ICD codes
Can you also tell use which specific codes are used for each disease?

15. Is History of falls in the last 12 months recorded?
Yes

16. If yes, are the following recorded?
- [ ] 1 previous fall
- [ ] multiple falls

17. Is data collected on medication?
Yes

18. If yes, are the following recorded?
- [ ] Whether they are on 1-3 medications
- [ ] Whether they are on 4 or more medications

19. Previous attendance at A&E
Yes

20. Previous treatment
- [ ] Examined and sent home without treatment
- [ ] Sent home after treatment
- [ ] Treated and refered to GP for further treatment
- [ ] Treated and refered for further treatment as outpatient.
- [ ] Treated and admitted to hospital
- [ ] Transferred to another hospital
- [ ] None
- [ ] Other, please specify

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DESCRIPTION OF A FALL: Please tell us whether the following information is recorded

21. Date of injury
Yes

22. Time of injury
Yes

23. Place of injury
Could the following categories be applied?
- ☐ Home
- ☐ Residential Institution
- ☐ Medical service area
- ☐ Public highway, street or road
- ☐ Transport other
- ☐ Industrial/construction
- ☐ Farm or other area of production
- ☐ Recreational area/cultural area/public building
- ☐ Commercial area (non recreation)
- ☐ Countryside
- ☐ Other, please specify

24. If not, can you state what categories are used?

25. Activites being carried out when injured
- ☐ Paid work
- ☐ Unpaid work
- ☐ Education
- ☐ Sports and Exercise in leisure time
- ☐ Leisure or play
- ☐ Vital activity
- ☐ Being taken care of
- ☐ Travel (not already specified)
- ☐ Other, please specify

26. Reported loss of conciousness
Yes

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TREATMENT/INTERVENTION Is the following information recorded?

27. Date of attendance (at hospital)
Yes

28. Time of attendance
Yes

29. Type of injury recorded
- [ ] No injury diagnosed
- [ ] Contusion, bruise
- [ ] Abrasion
- [ ] Open wound
- [ ] Fracture, please state
- [ ] Distorsion, sprain
- [ ] Concussion
- [ ] Other, please specify

30. If injury is recorded can you state how each one is coded? e.g. ICD code?

31. Body part injured
Yes

32. If the part of the body which sustained the injury is reported? How is this catagorised?

33. Treatment
- [ ] Examined and sent home without treatment
- [ ] Sent home after treatment
- [ ] Treated and refered to GP for further treatment
- [ ] Treated and refered for further treatment as outpatient.
- [ ] Treated and admitted to hospital
- [ ] Transferred to another hospital
- [ ] None
- [ ] Other, please specify

34. Number of days admitted
e.g. date of discharge minus the date of admission. If the date of discharge is the date of admission, the number of days in hospital is 1.
Yes

35. Died in hospital within 90 days
Yes

36. Multi-factorial risk assessment?
Yes

31. Body part injured
Yes

32. If the part of the body which sustained the injury is reported? How is this catagorised?

33. Treatment
- [ ] Examined and sent home without treatment
- [ ] Sent home after treatment
- [ ] Treated and refered to GP for further treatment
- [ ] Treated and refered for further treatment as outpatient.
- [ ] Treated and admitted to hospital
- [ ] Transferred to another hospital
- [ ] None
- [ ] Other, please specify

34. Number of days admitted
e.g. date of discharge minus the date of admission. If the date of discharge is the date of admission, the number of days in hospital is 1.
Yes

35. Died in hospital within 90 days
Yes

36. Multi-factorial risk assessment?
Yes

37. Interventions
- [ ] Single (single intervention)
- [ ] Multiple (standardised combination)
- [ ] Multi-factorial (individual combination)

38. Are providers of the intervention recorded?
Yes

39. Provider of the intervention
Such as
- [ ] Hospitals
- [ ] Acute
- [ ] Emergency Department
- [ ] Subacute e.g. rehabilitation
- [ ] Nursing and residential care
- [ ] Provider of ambulatory health care
- [ ] Community based providers
- [ ] Other, please specify

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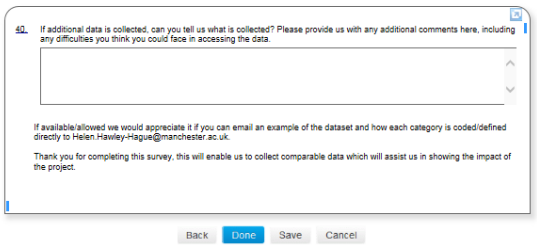

40. If additional data is collected, can you tell us what is collected? Please provide us with any additional comments here, including any difficulties you think you could face in accessing the data.
If available/allowed we would appreciate it if you can email an example of the dataset and how each category is coded/defined directly to Helen.Hawley-Hague@manchester.ac.uk.
Thank you for completing this survey, this will enable us to collect comparable data which will assist us in showing the impact of the project.
Back
Done
Save
Cancel

Example Commentary by Partner 10 AUSL11 on ability to provide falls data.

1-2: ok

3: traumas are recorded, not falls

4-8: ok

9-10: not recorded, recorded only where patients were born

11-12: ok

13: possible to get by using the unique identifier (codice fiscale) of the patients and/or linking it to other databases (community specialistic activity, medication, hospital admissions, rehabilitation, etc)

14: ICD-IX-CM: please bi more specific on what is wished

15-18: recorded not in the clinical notes but not in the database

19-20: previous treatment: possible to get this information by using the unique identifier (codice fiscale) of the patients within the A&E (pronto soccorso) database and/or linking it to other databases (community specialistic activity, medication, hospital admissions, rehabilitation, etc)

21 and 22: ok

23, 24 and 25: if the cause of the access to the A&E department is trauma the following codes are recorded (1 = aggression; 2 = autolesionism; 3 = work accident; 4 = home accident; 5 = school accident; 6 = sport accident; 7 = road accident; 9 = accidents in other closed environments)

1 = aggressione; 2 = autolesionismo; 3 = incidente sul lavoro; 4 = incidente domestico; 5 = incidente scolastico; 6 = incidente sportivo; 7 = incidente in strada; 9 = incidenti in altri luoghi chiusi

26: ok

27-33:ok

34: possible by linking the A&D database with the hospital database by the unique identifier (codice fiscale)

35: died in hospital possible by linking the A&D database with the hospital database by the unique identifier (codice fiscale); anyhow, wherever the death occurred is possible to access to status in life or death linking the A&D database with the mortality registry of the municipalities by the unique identifier (codice fiscale)

36: and 37: non systematic assessment is made at the A&D level

38-39: any action taken is recorded in the ausl databases and can be tracked by the codice fiscale.

40: if more details are necessary please let me know I add also a file with the structure of the A&E department database it is in Italian (36 page file *Struttura tecnica della Base Dati e Documentazione di utilizzo* not attached herein- available on request)

Appendix 2: Core dataset.
(All partners, represented countries)

Demographics

Recording Country
Locality
Persons country of residence
Patient Age
Gender
- *Male*
- *Female*

Ethnicity (open box, not pre-defined)
Place of Residence
- *Own home*
- *Assisted Living e.g. Sheltered Housing*
- *Hospital*
- *Acute*
- *Subacute (rehabilitation)*
- *Nursing and Residential Care Facilities*
- *Providers of ambulatory care*

Patient History

Chronic Disease
- ICD codes used or applied to free text.

History of falls in the last 12 months
- *Yes*
- *No*

Medication (open text box)
Previous attendance to hospital
- *Yes*
- *No*

Description of fall

Date of Injury
Time of injury
Reported loss of consciousness
- *Yes*
- *No*

Treatment/Intervention

Date of attendance
Time of attendance
Part of the body (free text-then coded using ICD)
Number of days of admission
Died in hospital within 90 days

Multi-factorial risk assessment
Yes
No
Provider of intervention (often only recorded as hospital)
Free text

Appendix 2: Additional Core data subset (as above but including the following):
(Greece, Finland, Sweden and Italy)
(UK and Hungary providing some parameters)

Patient History

Previous Treatment (see IDB for further definitions)
Examined and sent home without treatment
Sent home after treatment
Treated and referred to GP for further treatment
Treated and referred for further treatment as outpatient.
Treated and admitted to hospital
Transferred to another hospital
Other
Unknown

Description of fall

Place of Injury (see IDB for further definitions)
Home
Residential Institution
Medical Service Area
Public highway, street or road
Transport: Other
Industrial/construction
Farm or other area of production
Recreational area/cultural area/public building
Commercial area (non-recreation)
Countryside
Other specified
Non-specified

Treatment/Intervention

Type of injury (using ICD codes but can also be mapped to IDB)
No injury diagnosed
Contusion, bruise
Abrasion
Open wound
Fracture, please state
Luxation, dislocation
Distortion, sprain

Concussion
Other specified type of injury
Unspecified injury

Treatment (see IDB for further definitions)
Examined and sent home without treatment
Sent home after treatment
Treated and referred to GP for further treatment
Treated and referred for further treatment as outpatient.
Treated and admitted to hospital
Transferred to another hospital
Other
Unknown

Interventions
Single (single intervention)
Multiple (standard combination)
Multi-factorial (individual combination)

Appendix 3

QUESTIONNAIRE- DELIVERING EXERCISE TO OLDER PEOPLE AT A HIGH RISK OF FALLS

The survey instrument below looks long but this represents all possible questions that may be generated.
The first question online asks what services are provided by this respondent. It is unlikely all service types will be provided. Based on the repsonses to this question customised question lists are generated. Thus ticking A-C generate 15 questions each, ticking D&E 10 questions, whilst everyone answers questions the generic questions associated with section F

A-☐Rehabilitation in group sessions

B-☐Rehabilitation in 1to1 individual therapist sessions

C-☐ Home exercise sessions to reduce the risk of falls

D-☐ Community group general exercise sessions for older adults - but not specifically strength and balance exercises

E-☐ Community group exercise sessions which include strength and balance exercises to reduce future risk of falls

F -☐We currently offer no exercise sessions specifically for older people.

QUESTIONNAIRE-DELIVERING EXERCISE TO OLDER PEOPLE AT A HIGH RISK OF FALLS

We are interested in understanding what interventions are delivered in different countries/regions to prevent/reduce falls in older people. This will allow us to gather a baseline of delivery before we begin the cascade training across the partners within the ProFouND project. If you do **NOT** currently have any mechanism for delivering exercise to older people at risk of falls please still complete the specific section of the questionnaire.

Country

County/locality

Organisation name:

Contact email address:

Below please tick as many boxes as apply as this generates the questionnaire sections for you to complete, as well as a general final section for all.
Rehabilitation refers to sessions delivered normally by therapists in a hospital or outpatient setting.

What type of exercise classes/one to one intervention do you currently offer for older people at risk of falls? (A-C generate 15 questions each, D&E 10 question, everyone answers section F)

A-☐Rehabilitation in group sessions

B-☐Rehabilitation in 1to1 individual therapist sessions

C-☐ Home exercise sessions to reduce the risk of falls

D-☐ Community group general exercise sessions for older adults - but not specifically strength and balance exercises

E-☐ Community group exercise sessions which include strength and balance exercises to reduce future risk of falls

F -☐We currently offer no exercise sessions specifically for older people.

Please describe any other services

……

A: Rehabilitation in group sessions

1. Do you provide a service following an injury or admission to hospital that uses rehabilitation exercises in groups to reduce the risk of future falls?

- ☐ Yes
- ☐ No
- ☐ Don't know

2. Once group based rehabilitation has been offered to the patient on average how long do they wait before it starts?

- ☐ Less than 1 week
- ☐ 1 -2 weeks
- ☐ 2-3 weeks
- ☐ 3-4 weeks
- ☐ More than 1 month
- ☐ 2 or more months

3. Once group based rehabilitation starts how often do patients receive a service?

- ☐ Once a week
- ☐ Twice a week
- ☐ Once every 2 weeks
- ☐ Once every 4 weeks
- ☐ Other, please specify

4. How long does each session last?

- ☐ Less than 30 minutes
- ☐ 30mins-45 minutes
- ☐ 45 mins-60 minutes
- ☐ More than 60 minutes

5. Over what period of time does the patient receive group based rehabilitation?

- ☐ 1- 4 weeks
- ☐ 5-8 weeks
- ☐ 9-12 weeks
- ☐ 13 -16 months
- ☐ 17 weeks +
- ☐ No end point, we can see them for as long as they want (e.g. for life)
- ☐ Other - please specify

6. In general what types of follow on exercise sessions are available for older people after rehabilitation is completed? (Please tick all that apply)

- ☐ Strength and balance

- ☐ Chair based (seated)
- ☐ Exercise referral scheme (gym based or community based)
- ☐ Tai Chi
- ☐ General 50+ exercise classes
- ☐ Walking programmes
- ☐ None
- ☐ Don't know
- ☐ Other, Please specify.

7. Before group based rehabilitation starts does the patient receive a pre-exercise assessment e.g. of their strength/balance/gait/function?

- ☐ Yes, please specify
- ☐ No
- ☐ Don't know

8. Is pre-exercise assessment used to adapt exercises to suit the patient?

- ☐ Yes, please specify
- ☐ No
- ☐ Don't know

9. Do you re-assess the pre-exercise assessments at the end to demonstrate change over time?

- ☐ Yes, please specify
- ☐ No
- ☐ Don't know

10. Does your group based rehabilitation service use progression of strength exercises?

- ☐ Yes
- ☐ No
- ☐ Don't know

11. How does your group based rehabilitation progress strength exercises? (Tick as many boxes as apply)

- ☐ Increasing the number of exercises
- ☐ Increasing the number of repetitions of the exercise
- ☐ Increasing the number of sets of the exercise
- ☐ Increasing the weight size and or strength of the resistance band
- ☐ Increasing peak strain
- ☐ Other, please specify

12. Does your group based rehabilitation service use progression of balance exercises?

- ☐ Yes
- ☐ No
- ☐ Don't know

13. How does group based rehabilitation progress balance exercises? (Please tick as many boxes as apply)

- ☐ Increasing number of balance exercises
- ☐ Using more challenging balance exercises
- ☐ Reducing hand holds (support) during balance exercises
- ☐ Introducing vestibular and proprioceptive challenges
- ☐ Don't know
- ☐ Other, please specify

14. On average how many hours of supervised strength and balance exercise in groups does a patient receive?

……
……..

15. If there is a delay in patients receiving rehabilitation is this due to the demand for your service?

- ☐ Yes
- ☐ No
- ☐ Don't know

B: Rehabilitation in 1 to 1 sessions with therapist

16. Do you provide a service following an injury or admission to hospital that uses 1 to 1 rehabilitation exercises to reduce the risk of future falls?

- ☐ Yes
- ☐ No
- ☐ Don't know

17. Once 1 to 1 rehabilitation has been offered to the patient on average how long do they wait before it starts?

- ☐ Less than 1 week
- ☐ 1 -2 weeks
- ☐ 2-3 weeks
- ☐ 3-4 weeks
- ☐ More than 1 month
- ☐ 2 or more months

18. Once 1 to 1 rehabilitation starts how often do patients receive a service?

- ☐ Once a week
- ☐ Twice a week
- ☐ Once every 2 weeks
- ☐ Once every 4 weeks
- ☐ Other, please specify……..……..……

19. How long does each 1 to 1 session last?

- ☐ Less than 30 minutes
- ☐ 30mins-45 minutes
- ☐ 45 mins-60 minutes
- ☐ More than 60 minutes

20. Over what period of time does the patient receive 1 to 1 rehabilitation?

- ☐ 1- 4 weeks
- ☐ 5-8 weeks
- ☐ 9-12 weeks
- ☐ 13 -16 months
- ☐ 17 weeks +
- ☐ No end point, we can see them for as long as they want (e.g. for life)
- ☐ Other - please specify……..……..……..……..……

21. In general what types of follow on exercise sessions are available for older people after 1 to 1 rehabilitation is completed? (Please tick all that apply)

☐ Strength and balance

☐ Chair based (seated)

☐ Exercise referral scheme (gym based or community based)

☐ Tai Chi

☐ General 50+ exercise classes

☐ Walking programmes

☐ None

☐ Don't know

☐ Other, Please specify……

22. Before 1 to 1 rehabilitation starts do patients receive a pre-exercise assessment e.g. of their strength/balance/gait/function?

☐ Yes, please specify……

☐ No

☐ Don't know

23. Is pre-exercise assessment used to adapt exercises to suit the patient?

☐ Yes, please specify……

☐ No

☐ Don't know

24. Do you re-assess the pre-exercise assessments at the end to demonstrate change over time?

☐ Yes, please specify……

☐ No

☐ Don't know

25. Does your 1 to 1 rehabilitation service use progression of strength exercises?

☐ Yes

☐ No

☐ Don't know

26. How does your 1 to 1 rehabilitation progress strength exercises? (Tick as many boxes as apply)

☐ Increasing the number of exercises

☐ Increasing the number of repetitions of the exercise

☐ Increasing the number of sets of the exercise

☐ Increasing the weight size and or strength of the resistance band

☐ Increasing peak strain

☐ Other, please specify……
…..

27. Does your 1 to 1 rehabilitation service use progression of balance exercises?

☐ Yes

☐ No

☐ Don't know

28. How does 1 to 1 rehabilitation progress balance exercises? (Please tick as many boxes as apply)

☐ Increasing number of balance exercises

☐ Using more challenging balance exercises

☐ Reducing hand holds (support) during balance exercises

☐ Introducing vestibular and proprioceptive challenges

☐ Don't know

Other, please specify……
……..

29. On average how many hours of supervised1 to 1 strength and balance exercise does a patient receive?

……
……..

30. If there is a delay in patients receiving 1 to 1 rehabilitation is this due to the demand for your service?

☐ Yes

☐ No

☐ Don't know

C - Home based exercise service

31. Do you offer a home based exercise service that uses exercise to reduce the risk of future falls?

- ☐ Yes
- ☐ No
- ☐ Don't know

32. Once home based exercise has been offered to the older person on average how long do they wait before it starts?

- ☐ Less than 1 week
- ☐ 1 -2 weeks
- ☐ 2-3 weeks
- ☐ 3-4 weeks
- ☐ More than 1 month
- ☐ 2 or more months

33. Once home based exercise has commenced how often are older people visited?

- ☐ Once a week
- ☐ Twice a week
- ☐ Once every 2 weeks
- ☐ Once every 4 weeks
- ☐ Other, please

specify………………..………………..……………………………………………………………………….

34. How long does each home based session last?

- ☐ Less than 30 minutes
- ☐ 30mins-45 minutes
- ☐ 45 mins-60 minutes
- ☐ More than 60 minutes

35. Over what period of time does the older person receive home based exercise?

- ☐ 1- 4 weeks
- ☐ 5-8 weeks
- ☐ 9-12 weeks
- ☐ 13 -16 months
- ☐ 17 weeks +
- ☐ No end point, we can see them for as long as they want (e.g. for life)
- ☐ Other - please

specify………………..………………..………………..……..……..……………………………………………

36. In general what types of follow on exercise is available for older people once the home based service is completed? (Please tick all that apply)

☐ Strength and balance

☐ Chair based (seated)

☐ Exercise referral scheme (gym based or community based)

☐ Tai Chi

☐ General 50+ exercise classes

☐ Walking programmes

☐ None

☐ Other, Please specify……

37. In home based exercise sessions does the older person receive a pre-exercise assessment e.g. of their strength/balance/gait/function?

☐ Yes, please specify……

☐ No

☐ Don't know

38. In home based exercise sessions is pre-exercise assessment used to adapt exercises to suit the older person?

☐ Yes, please specify……

☐ No

☐ Don't know

39. In home based exercise do you re-assess any of the pre-exercise assessments at the end of the programme to demonstrate change over time?

☐ Yes, please specify……

☐ No

☐ Don't know

40. Does your home based exercise use progression of strength exercises?

☐ Yes

☐ No

☐ Don't know

41. How does your home based exercise progress strength exercises? (Please tick as many boxes as apply)

☐ Increasing the number of exercises

☐ Increasing the number of repetitions of the exercise

☐ Increasing the number of sets of the exercise

☐ Increasing the weight size and or strength of the resistance band

☐ Increasing peak strain

☐ Other, please specify……
…..

42. Does your home based exercise use progression of balance exercises?

☐ Yes

☐ No

☐ Don't know

43. How does your home based exercise progress balance exercises? (tick as many boxes as apply)

☐ Increasing number of balance exercises

☐ Using more challenging balance exercises

☐ Reducing hand holds (support) during balance exercises

☐ Introducing vestibular and proprioceptive challenges

☐ Don't know

Other, please specify……
……..

44. On average how many hours of supervised strength and balance training do older people receive at home?

……
……..

45. If there is a delay in older people receiving the home based service is this due to the demand for your service?

☐ Yes

☐ No

☐ Don't know

D: Community based general exercise (not specifically strength or balance based, for example walking group)

46. Do you offer a community based group service that uses general exercise (like walking groups) to reduce the risk of future falls?

- ☐ Yes
- ☐ No
- ☐ Don't know

47. Once the community based group general exercise has been offered to the older person on average how long do they wait before it starts?

- ☐ Less than 1 week
- ☐ 1 -2 weeks
- ☐ 2-3 weeks
- ☐ 3-4 weeks
- ☐ More than 1 month
- ☐ 2 or more months

48. If you provide a community based group general exercise how often do older people attend?

- ☐ Once a week
- ☐ Twice a week
- ☐ Once every 2 weeks
- ☐ Once every 4 weeks
- ☐ Other, please specify……..……..……

49. How long does each general exercise session last?

- ☐ Less than 30 minutes
- ☐ 30mins-45 minutes
- ☐ 45 mins-60 minutes
- ☐ More than 60 minutes

50. Over what period of time do older people attend general exercise group sessions?

- ☐ 1- 4 weeks
- ☐ 5-8 weeks
- ☐ 9-12 weeks
- ☐ 13 -16 months
- ☐ 17 weeks +
- ☐ No end point, we can see them for as long as they want (e.g. for life)
- ☐ Other - please specify……..……..……..……..……

51. In general what types of follow on general exercise classes are available for older people in the community (Please tick all that apply)

☐ Aerobic exercise

☐ GoforLife

☐ Chair based (seated)

☐ Exercise referral scheme (gym based or community based)

☐ Tai Chi

☐ General 50+ exercise classes

☐ Swimming

☐ Walking programmes

☐ Nordic walking

☐ Sports

☐ None

☐ Don't know

☐ Other (1), Please specify……

☐ Other (2), Please specify……

52. In community based general exercise sessions does the older person receive a pre-exercise assessment e.g. of their strength/balance/gait/function?

☐ Yes, please specify……

☐ No

☐ Don't know

53. In community based general exercise sessions are pre-exercise assessment used to adapt exercises to suit the older person?

☐ Yes, please specify……

☐ No

☐ Don't know

54. In community based general exercise do you re-assess any of the pre-exercise assessments at the end of the programme to demonstrate change over time?

☐ Yes, please specify……

☐ No

☐ Don't know

55. On average how many hours of general exercise does an older person receive?

……
……..

56. If there is a delay in older people receiving general exercise is this due to the demand for your service?

☐ Yes

☐ No

☐ Don’t know

E - Community based group exercise (Strength and Balance)

57. Do you offer a community based group service that uses strength and balance exercises to reduce the risk of future falls?

- ☐ Yes
- ☐ No
- ☐ Don't know

58. Once community based group strength and balance exercise has been offered to the older person on average how long do they wait before it starts?

- ☐ Less than 1 week
- ☐ 1 -2 weeks
- ☐ 2-3 weeks
- ☐ 3-4 weeks
- ☐ More than 1 month
- ☐ 2 or more months

59. If you provide a community based group strength and balance exercise, how often do older people attend?

- ☐ Once a week
- ☐ Twice a week
- ☐ Once every 2 weeks
- ☐ Once every 4 weeks
- ☐ Other, please specify……

60. How long does each session last?

- ☐ Less than 30 minutes
- ☐ 30mins-45 minutes
- ☐ 45 mins-60 minutes
- ☐ More than 60 minutes

61. Over what period of time do older people attend group strength and balance exercise sessions?

- ☐ 1- 4 weeks
- ☐ 5-8 weeks
- ☐ 9-12 weeks
- ☐ 13 -16 months
- ☐ 17 weeks +
- ☐ No end point, we can see them for as long as they want (e.g. for life)
- ☐ Other - please specify……
……

62. In general what types of follow on exercise classes are available for older people in the community once they finish the strength and balance classes? (Please tick all that apply)

☐ Strength and balance

☐ Chair based (seated)

☐ Exercise referral scheme (gym based or community based)

☐ Tai Chi

☐ General 50+ exercise classes

☐ Walking programmes

☐ None

☐ Don't know

☐ Other, Please specify……

63. In community based strength and balance exercise sessions does the older person receive a pre-exercise assessment e.g. of their strength/balance/gait/function?

☐ Yes, please specify……

☐ No

☐ Don't know

64. In community based strength and balance exercise sessions are pre-exercise assessment used to adapt exercises to suit the older person?

☐ Yes, please specify……

☐ No

☐ Don't know

65. In community based strength and balance exercise do you re-assess any of the pre-exercise assessments at the end of the programme to demonstrate change over time?

☐ Yes, please specify……

☐ No

☐ Don't know

66. Does your community based strength and balance exercise use progression of strength exercises?

☐ Yes

☐ No

☐ Don't know

67. How does your community based strength and balance exercise progress strength exercises? (Please tick as many boxes as apply)

☐ Increasing the number of exercises

☐ Increasing the number of repetitions of the exercise

☐ Increasing the number of sets of the exercise

☐ Increasing the weight size and or strength of the resistance band

☐ Increasing peak strain

☐ Other, please specify……..

68. Does your community based strength and balance exercise use progression of balance exercises?

☐ Yes

☐ No

☐ Don't know

69. How does your community based strength and balance exercise progress balance exercises? (Please tick as many boxes as apply)

☐ Increasing number of balance exercises

☐ Using more challenging balance exercises

☐ Reducing hand holds (support) during balance exercises

☐ Introducing vestibular and proprioceptive challenges

☐ Don't know

Other, please specify……..

70. On average how many hours of supervised strength and balance exercise does an older person receive?

……..

71. If there is a delay in older people receiving a group based exercise is this due to the demand for your service?

☐ Yes

☐ No

☐ Don't know

Access and referral –all respondents should complete

72. Do you provide transport to the exercise sessions?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Not applicable – no class provision

73. Do you provide refreshments at the exercise sessions?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Not applicable – no class provision

74. Are older people charged for any of the exercise sessions?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Not applicable – no class provision

75. Do you have a formal referral pathway e.g. A flow chart of access into such exercise services?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Not applicable – no class provision

76. What are the referral criteria for your service/classes?

- ☐ 1 or more falls
- ☐ Injurious falls
- ☐ Loss of consciousness
- ☐ Use of risk assessment tool, please state which tool……..
- ☐ Self-referral
- ☐ Professional referral
- ☐ Not applicable – no class provision

Other, please state……

77. How can older people access your services?
(Please tick as many boxes as apply)

- ☐ Self-referral (the older person themselves can ask to join sessions)
- ☐ General practice (primary care professionals)
- ☐ Hospital (secondary care professionals)
- ☐ Community services (e.g. physiotherapy/occupational therapy)
- ☐ Voluntary (or non-governmental) services
- ☐ Don't know
- ☐ Other, please state.....
- ☐ Not applicable – no class provision

78. At the end of any of the exercise interventions is any advice given to older people about the continuation of an exercise programme (either at home or at a community exercise class)?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Not applicable – no class provision

79. At the end of any of the interventions provided are older people given a printed home exercise booklet?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Not applicable – no class provision

80. Who delivers your exercise sessions for older people who fall? (tick as many as apply)

- ☐ Occupational Therapists
- ☐ Physiotherapist
- ☐ Nurses
- ☐ Doctors
- ☐ Other clinically trained staff, Please state……
- ☐ Therapy assistants
- ☐ Exercise instructors
- ☐ Other non-clinically trained staff, Please state……
- ☐ Not applicable – no class provision

81. What is the basic level of training that staff receive in order to lead exercise sessions? (Tick all that apply)

☐ Evidence based strength and balance qualification (e.g. Otago), please specify……

☐ Other recognised national exercise qualifications for delivery of exercise to older people (not falls specific), please specify

……

☐ In house training (for strength and balance exercise delivery), please specify…… ……

☐ Not applicable – no class provision

82. How many staff are employed to deliver the service (please indicated whether they are full or part time and what clinical/non-clinical background they are from)?

……
……
……

☐ Not applicable – no class provision

F: Availability and access to exercise sessions

83. Are any follow on community exercises classes available in your area?

☐ Yes

☐ No

☐ Don't know

84. In general what types of follow on exercise classes are available for older people in the community? (Please tick all that apply)

☐ Strength and balance

☐ Chair based (seated)

☐ Exercise referral scheme (gym based or community based)

☐ Tai Chi

☐ General 50+ exercise classes

☐ Walking programmes

☐ None

☐ Other, Please specify……

85. What are the 3 most frequent reasons for not offering an exercise intervention to a patient? (please rank your answers 1, 2, 3 where 1 is the most frequent reason given and 3 the least)

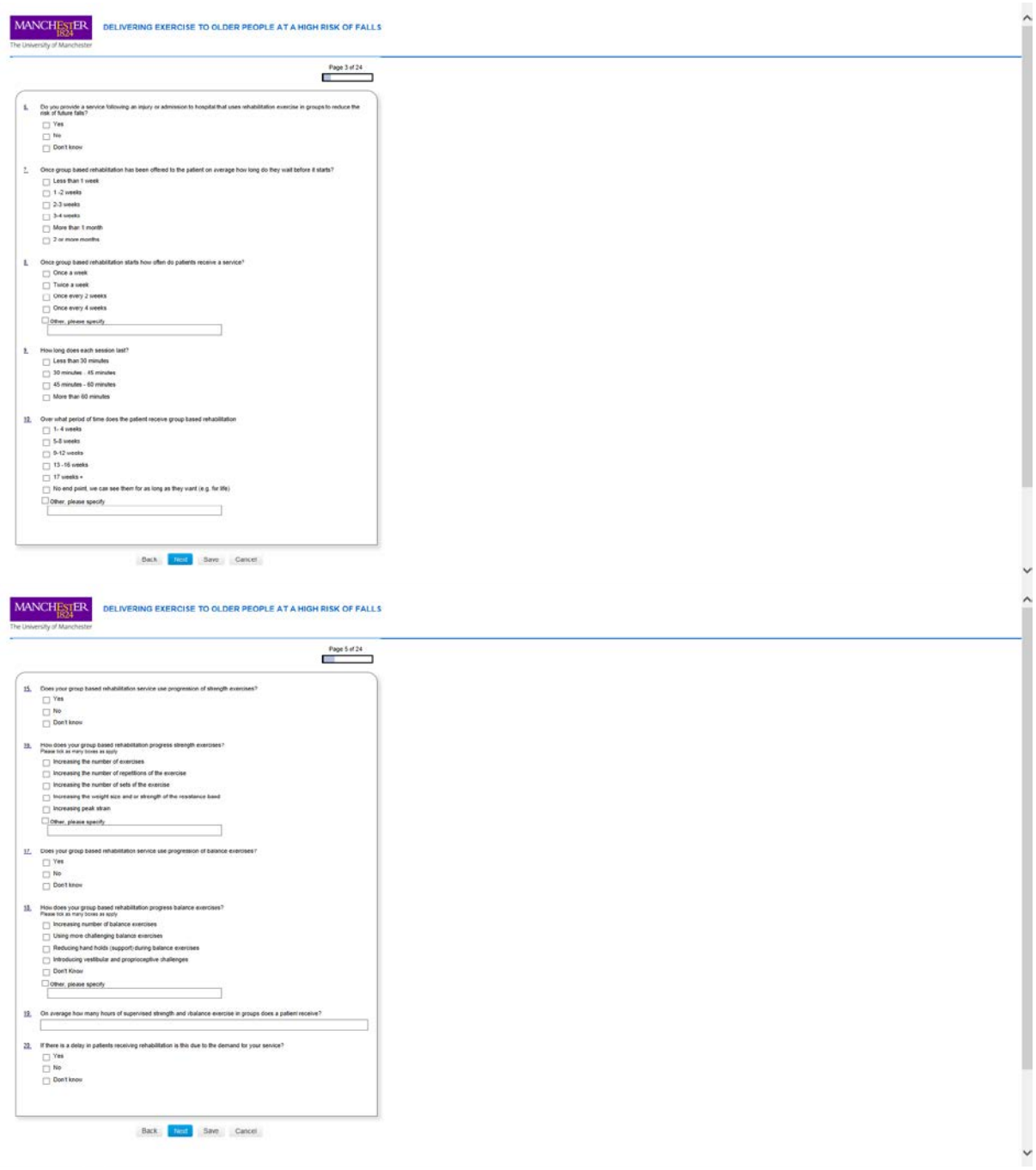
☐ Lack of resources (e.g. staff, venue, funding) please specify

……

- ☐ No one trained to deliver strength and balance exercises to older people
- ☐ The patient is already doing a form of strength and balance exercise
- ☐ There are no classes near to the patient
- ☐ The patient is too unwell
- ☐ The patient's level of cognitive function
- ☐ The patient's level of motivation
- ☐ Not applicable all patients are offered an exercise intervention

86. Any other comments or reflections

Screen shots of online questionnaire on delivering exercise to older people at a high risk of falls



Screen shots of online survey of delivering exercise to older people at a high risk of falls from https://apps.mhs.manchester.ac.uk/surveys/SurveyList.aspx