Assessing the severity of type 2 diabetes using clinical data based measures: a systematic review


Background/Aims: Assessing disease severity in diabetes enables identifying patients in need of targeted therapies, could help optimise the healthcare resources allocation. In this systematic review, our aim was to identify and critically-appraise measures that have used clinical data to grade type 2 diabetes severity.

Methods: MEDLINE, Embase and PubMed were searched between inception-June 2018. Data from studies reporting on diabetes-specific severity grading measures using medical data in adults with type 2 diabetes were extracted. Studies reporting only on other diabetes forms were excluded. After independent screening, detailed characteristics of the eligible measures were identified, including severity domains and the relationship between severity and health-related outcomes.

Results: We identified 18 severity measures in 17 papers (N=32,314 participants) across 17 countries. Measures’ designs were: diabetes severity index (N=8 studies); severity categories (N=7 studies); complications’ count (N=2 studies); or severity checklist (N=1 study). Diabetes-related complications and/or glycaemic control indicators were included in 89% of the measures. Two of the severity measures were validated in a separate study population. Increasing diabetes severity was associated with poorer cognitive function, higher healthcare expenses, and significantly greater risks for hospitalization and mortality. The identified measures differed greatly in terms of the included domains.

Conclusion: Increasing diabetes severity is associated with greater risks for adverse outcomes. Despite that our findings demonstrated the suitability of health records to assess diabetes severity, the clinical uptake of existing measures is poor. The need to advance diabetes severity assessment is important to develop actionable measures that would help benchmark efficient clinical services.
ICONS III: Identifying Continence Options after Stroke: developing a combined intervention for stroke survivors with urinary incontinence in the community


Background: Urinary incontinence (UI) affects half of stroke survivors in the acute phase, 44% at three months and 38% at one year.

Behavioural interventions (bladder training and pelvic floor muscle training, PFMT) are recommended first-line therapy, however they are rarely used during the rehabilitation phase or longer-term. Given the majority of stroke patients with UI have urge and stress (mixed) incontinence, combining bladder training with PFMT may maximise the chance of regaining continence.

We are a writing group funded by the Lancashire Research Institute For Global Health & Wellbeing (LIFE) to develop a combined intervention for community-dwelling stroke patients with UI.

Research questions: for UI,
1) What is the evidence for combining behavioural interventions?
2) What are the barriers and facilitators to implementation of behavioural interventions?
3) What should a combined intervention for UI comprise?
4) What intervention will maximise potential for patient benefit?
5) What are the best ways of implementing and evaluating the intervention?

Methods: Cochrane systematic review of combined behavioural interventions for UI;
1) Review of qualitative evidence of barriers and facilitators to implementation;
2) Through stakeholder engagement and using the evidence from 1) and 2), develop a theory-informed combined intervention;
3) Informed by objectives 1) to 3), develop a bid for a implementing and evaluating the intervention.

Results: We will present progress on points 1) to 3).

Conclusion: Health professionals in primary care are pivotal to improving care for people with UI after stroke. We welcome the opportunity to extend our network of collaborators.
Recruitment and methodological issues of conducting dementia research in British ethnic minorities: A systematic review

Authors: Waquas Waheed, Nadine Mirza, Muhammed Wali Waheed, Amy Blakemore, Cassandra Kenning, Yumna Masood, Peter Bower. The University of Manchester, University of Leicester

Background: There is no collation of information that details recruitment and methodological issues researchers face when including ethnic minorities within dementia research. Without such a compilation solutions to negate existing issues cannot be devised and future researchers may continue to face issues with no protocol to measure their methodology against. Therefore, we conducted a systematic review of the barriers and solutions for the recruitment and methodology of conducting dementia research in British ethnic minorities.

Method: Our systematic review included all publications detailing UK based dementia research that included any ethnic minorities. Information from the publications was extracted regarding the recruitment and methodological issues faced by the researchers, along with any solutions they considered. Related extracts were grouped to form overarching themes.

Results: We identified 46 papers meeting our inclusion criteria of which 30 described methodological issues. These were collated into six themes, with individual subthemes; Attitudes and beliefs about dementia, recruitment process, data collection issues, practical issues, researcher characteristics and paucity of literature. These themes identified three areas that require intervention for improvement in dementia research: community and patient education, health services and researcher training. Extracts pertaining to solutions are being attributed to these three areas and individual themes on issues.

Conclusions: Acknowledgement of the areas that require improvement along with our collation of reported recruitment and methodological issues acts as a precursor for improving existing and developing new solutions. This review can be utilised by future dementia researchers to identify gaps in their own methodologies.

The role of the General Practitioner in the management of patients with self-harm behaviour in primary care: a systematic review

Authors: Mughal F, Troya I, Dikomitis L, Chew-Graham CA, Babatunde O
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Background/Aims: Around 220,000 people present with self-harm (SH) annually to emergency departments across England. SH increases risk of suicide up to 50 times. Two-thirds of people present to their General Practitioner (GP) in the month preceding a SH episode and within the month following SH. GPs may be well placed to intervene...
to prevent SH and suicide. The aim is to explore the role of the GP in the management of SH and understand potential factors/interventions for reducing the number of SH episodes.

**Method:** This review is being conducted and reported in accordance with PRISMA guidelines. A systematic search of published literature on the role of the GP in the management of SH was conducted in: MEDLINE, PsychINFO, EMBASE, CINAHL, AMED, and Web of Science. Titles, abstracts, and full texts of articles were independently screened by two reviewers, with discrepancies resolved by discussion. The quality of included studies was appraised using Mixed Methods Appraisal Tool. Data extraction included: study design; knowledge, and behaviours of GPs, and barriers to GP SH management. A narrative synthesis is being conducted.

**Results:** The search found 6,976 unique citations, of which 12 full-text papers are being synthesised. Most papers are good quality. GPs felt SH to be a ‘cry for help’, but see themselves as frontline support for patients.

**Conclusion:** Preliminary conclusions highlight a need for GP training in brief psychosocial interventions, better relations with specialist services, and more SH community services. This review is important for the development of SH interventions in primary care.

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**Health at 95+: Experiences of living and of accessing services at an advanced age**

**Authors:** Hanson H, Duncan R, Hanratty B, Robinson L, Adamson, J. Newcastle University

**Background/Aims:** People aged over 85 years are the fastest growing section of our population. We know that this population has high risk of multiple morbidity and frailty and yet we have limited understanding how this is experienced by those in the ‘oldest old’ cohort – those over 95 years. We conducted a qualitative study to uncover the health and social care needs of nonagenarians with a focus on primary care.

**Methods:** We have conducted qualitative interviews with a sample of survivors of the Newcastle 85+ study. This is the largest cohort of the very old in the UK and are now 96/97 years old. A purposive sample (from 80 surviving participants), reflecting gender, socio-economic position, place of residence, physical and cognitive health were invited to participate in interviews (n=20). Interviews have explored participants’ day-to-day experiences and feelings about their current circumstances, have been transcribed verbatim and analysed using a thematic approach.

**Results:** We will discuss the health and social care needs identified by the participants, how they view service provision and the ways in which they access services – in particular primary care. We will describe how the participants have
adapted to changes in their circumstances in the context of both formal and informal networks which enables them to maintain independence.

**Conclusion:** This qualitative information will be valuable for developing and planning appropriate primary care services, and how these interact with social care, which incorporate the needs of, and are acceptable to, the oldest old.

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**Research Abstracts Friday 30th November 2018**

**Good NEWS for care home residents? A mixed-methods study exploring the impact of the National Early Warning Score in care homes**

**Authors:** Barker R, Russell S, Stocker R, Liddle J, Adamson J, Hanratty B. Newcastle University

**Background:** Care home residents are some of the most complex patients in general practice. Identifying acute illness quickly in older adults is challenging, particularly for staff without nursing training. The National Early Warning Score (NEWS) is embedded across UK hospitals to identify patients at risk of acute deterioration. Equipment to measure vital signs, and tablet computers to calculate the NEWS, have been issued to all 47 care homes in Sunderland. This mixed-methods study aimed to assess the implementation of NEWS into care homes, and its impact on residents’ care.

**Methods:** Semi-structured interviews, with 20 individuals (15 care home staff and 5 external healthcare professionals), and a NoMAD survey were conducted to explore subjective accounts, views and experiences of the intervention. Quantitative analysis describes patterns of use and how the NEWS may need to be adapted to this setting.

**Results:** 18,015 NEWS scores were produced over 24 months, for care home residents aged ≥65. Although the number of measurements increased significantly over time, only a minority of care homes have embedded the intervention into daily practice. Qualitative analysis revealed barriers to its use including; complexity of the intervention and care home setting, challenges in measuring vital signs, and the need for context-specific training. Responses from 42 NoMAD surveys across 22 care homes were generally positive about the intervention, believing it could form part of their work in future.

**Conclusions:** There is some evidence to support the wider implementation of NEWS measurement in care homes, to improve healthcare in this setting. However, this is a complex intervention in a complex environment, requiring context-specific training and implementation.
Using Advanced Clinical Practitioners to address the workforce crisis in the General Practice setting: a coal-face view of the opportunities and challenges

Authors: Brown I, Reeve J, Burton C, Jackson B, Perrin J. HYMS

Background/Aims: Advanced clinical practitioner (ACP) roles in primary care are not new. But today’s workforce crisis has prompted efforts to rapidly expand these roles. We know little about the impact of these efforts on front-line practice. This NHSE funded scoping project aimed to describe ACP preparation and implementation in one region and so identify the key questions to consider if we are to optimise impact.

Methods: Mixed data set including rapid review of national policy, NIHR training, and local recruitment documents; workforce numbers analysis; and focus groups with ACPs, ACP students, GPs and patients. Descriptive coding of data set to describe key themes arising. Subsequent secondary analysis informed by Normalisation Process Theory a robust ecological framework to systematically analyse complex social processes of implementation.

Results: All stakeholders welcomed the potential of ACP roles to address General Practice challenges. However, barriers for optimal impact emerged in the ‘work’ of implementation. Including divergent perspectives on the purpose/scope of ACP roles; unintended consequences in impact on existing staff (with risk of reducing capacity) and on patient care navigation. These issues, primarily of coherence and cognitive participation, within the implementation process were reflected in uncertainties about the specific skill set needed for primary care and underdevelopment of mechanisms for reflexive monitoring.

Conclusion: Our work provided rapid recommendations to NHSE which are informing policy strategy. But also highlight research questions if we are to better understand, and so plan for, the extension and expansion of the general practice workforce.

Evaluation of nurse training to deliver an integrated care review for patients with inflammatory rheumatological conditions in primary care: a mixed methods study

Authors: Machin A, Herron D, Jinks C, Hilder S, Cooke K, Desilva EE, Chew-Graham C. Keele University

Background/Aims: People with inflammatory rheumatological conditions are at an increased risk of common comorbidities such as cardiovascular (CV) disease, osteoporosis, anxiety and depression. These are often not recognized or treated and can lead to increased morbidity and mortality.

INCLUDE, a pilot trial, aimed to evaluate the feasibility and acceptability of a nurse-led integrated primary care review, including QRisk, FRAX, case finding for anxiety and
depression, for people with inflammatory rheumatological conditions in primary care.

**Methods:** Patients with inflammatory rheumatological conditions attended a nurse-led review at their GP practice. Two rheumatology nurses participated in training to deliver the review. Interviews were conducted with nurses to explore their experiences of training.

With patient consent, a convenience sample of INCLUDE consultations were audio-recorded. Fidelity analysis was undertaken using a predefined checklist.

**Results:** The nurses reported the training to be comprehensive and useful, and equipped them to deliver the review by developing knowledge and skills. Fidelity checks on ten audio-recorded consultations revealed most components of the review were delivered, and the review's purpose and a summary of the management plan were communicated well. Diet and exercise were not fully explored in 4 consultations, whilst some responses to the case-finding questions for anxiety and depression were normalized.

**Conclusion:** INCLUDE nurses were positive about the depth and usefulness of the training, which helped to deliver the review. Fidelity checks have highlighted important areas for further training, including discussion of the outcomes of case-finding questions and of findings related to BMI and lifestyle advice.

‘You won’t get my buy-in with fear’: Co-designing a cervical screening intervention with women over fifty

**Authors:** Bravington A, Chen H, Dyson J, Jones L, Macleod U. Hull York Medical School

**Background:** A 60% rise in cervical cancer cases in women over fifty is predicted by 2036, yet 20-25% of this age group do not attend screening. Improving uptake in this age group is a policy priority. In a recent interview study exploring patient and professional perceptions of enablers and barriers to attendance, we asked the research question: What would encourage women over fifty to attend cervical screening?

**Methods:** We convened a focus group of older women who attended, delayed attending, and chose not to attend, and invited them to co-design an intervention to encourage attendance. Study data was analysed using concepts from behaviour change theory; findings were presented and used to structure group dialogue.

**Results:** Three BCT concepts were identified as leading issues in the data: 1. beliefs about consequences, 2. emotion, 3. social influences. These were matched to behaviour change techniques using the Theoretical Domains Framework: 1. persuasive Information; 2. stress management; 3. social processes. The focus group discussed how these concepts could be recognised within an intervention. The group linked concept 1 to addressing unanswered questions, concept 2 to problem-solving
practitioner challenges, and concept 3 to peer group communication. Modes of delivery were brainstormed using APEASE criteria (acceptability, practicability, effectiveness, affordability, safety, equity); the resulting intervention was a credit-card sized concertina leaflet using patient stories in a question-and-answer format.

**Conclusions:** Discussions using stakeholder narratives structured by theoretical concepts can allow effective, accountable participation in intervention development. Evaluation using a Donabedian framework is the next step for the project.