Institution: Cardiff University

Unit of Assessment: Allied Health Professions, Dentistry, Nursing and Pharmacy (3)

Title of case study: Embedding a new model of shared decision making in healthcare policy and practice

Period when the underpinning research was undertaken: 2010 – 2017

Details of staff conducting the underpinning research from the submitting unit:

Name(s):	Role(s) (e.g. job title):	Period(s) employed by submitting HEI:
Natalie Joseph-Williams	Lecturer	01/08/2007 – present
Adrian Edwards	Professor	01/05/2005 – present
Stephanie Sivell	Research Associate	10/12/2001 – present
Amy Lloyd	Research Fellow	01/08/2010 – present
Glyn Elwyn	Professor	01/05/2005 – 01/11/2013

Period when the claimed impact occurred: 2014 – 2020

Is this case study continued from a case study submitted in 2014? No

1. Summary of the impact (indicative maximum 100 words)

Shared decision making (SDM) supports patients to make the best treatment choice after reviewing evidence-based options with their clinician. Cardiff researchers led a major research programme which identified barriers to SDM implementation and developed a new 'three-talk' SDM model, training and improved patient decision aids for use in clinical practice. The Cardiff model formed part of a Welsh training programme, with evidenced benefits (e.g., the Aneurin Bevan University Health Board Musculoskeletal Physiotherapy service). The dental workforce in Wales further adopted Cardiff SDM approaches in a training package released in late 2020 (delayed from summer 2020 due to Covid-19). Cardiff's research findings also provided evidence for UK SDM healthcare policies, and international guidelines which set minimum standards for patient decision aids.

2. Underpinning research (indicative maximum 500 words)

Shared Decision Making (SDM) is widely accepted and evidenced as the gold standard approach to making healthcare decisions but is rarely implemented in routine practice. Patient decision aids are a critical tool in SDM, as a means of helping people make informed choices about healthcare that take into account their personal preferences. Cardiff research, via The Making Good Decisions in Collaboration (MAGIC) Programme, identified the key barriers to SDM implementation and produced a new model, as well as optimal formats for patient decision aids, and a training programme to facilitate SDM use in clinical settings.

In 2010, the Health Foundation commissioned MAGIC, a large-scale SDM implementation programme working with clinical teams and patients in routine healthcare settings **[G3.1, G3.2]**. MAGIC was a joint research programme between Cardiff and Newcastle Universities where Cardiff led on developing a new SDM model for clinical practice, and Newcastle led on alternative ways to support SDM engagement and measurement within organisations, with both teams leading on different forms of training and patient decision aids. Via MAGIC, the Cardiff team identified barriers to successful implementation of SDM. For example, they found that clinicians **[3.1]**:

- believed that they already involved patients in decisions about their care;
- often reported that patients did not want SDM;
- lacked the right tools to implement SDM;
- did not have time to focus on SDM due to other demands on time.

The team also found that:

- patients felt unable to participate in SDM due to lack of knowledge, or due to the power imbalance in the clinician-patient relationship **[3.2]**;

- providing patient decision aids (e.g., information leaflets, website links) to patients after consultations did not facilitate improved SDM **[3.1]**;
- there was no meaningful way of capturing the difference that SDM made to patients **[3.1]**.

2.1 Developing a new model for SDM in clinical practice

The Cardiff team addressed these barriers by developing a new model designed to guide clinicians on how they could integrate SDM in patient consultations. The 'three-talk model' was based on three stages of patient engagement **[3.1, 3.3]**:

- The first – choice talk – ensured that the patient knew that options were available and that they had choice in their decisions.
- The second – option talk – described the options available, including their evidence base (risks and benefits).
- The final stage – decision talk – focused on patient preference and sought to arrive at shared treatment decision.

The Cardiff team also found that the most important factor in enabling SDM was the communication skills of the clinician during a consultation **[3.1]**. They used their model to form the basis of an SDM Train the Trainer programme, where individuals receive training and then go on to train colleagues. The programme was underpinned by Cardiff's research into the key barriers of SDM implementation, specifically that normalising SDM requires intensive work to ensure clinicians understand the purpose of involving patients in decisions about their care **[3.3]**. The SDM Train the Trainer programme combined skills training workshops, role play scenarios, and implementation planning, ensuring that clinicians and healthcare managers could routinely embed SDM in clinical practice, with adaptations across different clinical settings **[3.1, 3.3, 3.4]**. The role play scenarios, in particular, were found to help clinicians explore what matters to patients, significantly improving communication of treatment risks and addressing attitudinal barriers **[3.1]**.

2.2 Understanding use of patient decision aids

As part of their research, the Cardiff team also identified the most effective ways to share information about treatment options and risks using patient decision aids. Patient decision aids aim to provide evidence-based information to help patients understand treatment risks and benefits, allowing them to engage in informed and effective decision making. Although multiple types of patient decision aids had been developed previously, the Cardiff team found that the most effective approach was a simple format based on frequently asked questions from previously tested tools **[3.1]**. Crucially, this approach of laying out each treatment option with its pros and cons, when used *within* a consultation, enabled clinicians to undertake SDM with patients, leading patients to better understand their choices. Clinicians reported a 'handover' effect with the use of the decision aids, with patients becoming more confident engaging in collaborative dialogue **[3.1]**.

With various patient decision aids already in existence and others in development, a means of verifying their credibility was required. Elwyn and Edwards used their research expertise to support development of the first internationally-recognised quality criteria framework for patient decision aids **[3.5]**. Joseph-Williams and Edwards subsequently coordinated research to identify minimum certification standards for new patient decision aids, which included forty-four items split into three new categories: 1) qualifying criteria – required in order for an intervention to be considered a decision aid; 2) certification criteria – without which a decision aid is judged to have a high risk of harmful bias; and 3) quality criteria – these strengthen a decision aid but do not present a high risk of harmful bias if not met **[3.6]**.

3. References to the research (indicative maximum of six references)

[3.1] Joseph-Williams N, **Lloyd A**, **Edwards A**, Stobbart L, Tomson D, Macphail S, Dodd C, Brain K, Elwyn G, Thomson R. Implementing shared decision making in the NHS: lessons from the MAGIC programme. *BMJ*. 2017; 357:j1744. DOI:10.1136/bmj.j1744

[3.2] Joseph-Williams N, Elwyn G, **Edwards A**. Knowledge is not power for patients: a systematic review and thematic synthesis of patient reported barriers and facilitators to shared

decision making. *Patient Education & Counselling*. 2014; 94(3): 291-309. DOI:10.1016/j.pec.2013.10.031
[3.3] Elwyn G, Frosch D, Thomson R, **Joseph-Williams N**, **Lloyd A**, Kinnersley P, Cording E, Tomson D, Dodd C, Rollnick S, **Edwards A**, Barry M. Shared decision making: A model for clinical practice. *Journal of General Internal Medicine*. 2012; 27(10): 1361-7. DOI:10.1007/s11606-012-2077-6
[3.4] Lloyd A, **Joseph-Williams N**, **Edwards A**, Rix A, **Elwyn G**. Patchy 'coherence': using Normalisation Process Theory to evaluate a multi-faceted shared decision making implementation programme (MAGIC). *Implementation Science*. 2013; 5(8): 102. DOI:10.1186/1748-5908-8-102
[3.5] Elwyn G, O'Connor A, Stacey D, Volk R, **Edwards A**. Developing a quality criteria framework for patient decision aids: online international Delphi consensus process. *BMJ*. 2006 ;333(7565):417. DOI: 10.1136/bmj.38926.629329.AE.
[3.6] Joseph-Williams N, Newcombe R, Politi M, Durand MA, **Sivell S**, Stacey D, O'Connor A, Volk RJ, **Edwards A**, Bennett C, Pignone M, Thomson R, **Elwyn G**. Toward minimum standards for certifying patient decision aids: A Modified Delphi Consensus Process. *Med Decision Making*. 2013, 34:699. DOI: 10.1177/0272989X13501721

Selected grants:

[G3.1] G Elwyn (PI), A Edwards, P Kinnersley 'Shared decision making', The Health Foundation 01/08/2010-30/11/2012 £250,000
[G3.2] K Brain, **A Edwards,** F Wood, 'Understanding the shared decision making encounter: A mixed-methods evaluation of patients and clinicians of MAGIC', The Health Foundation, 22/10/2013-30/11/2016, £246,484

4. Details of the impact (indicative maximum 750 words)

Cardiff's research on SDM was applied to support more effective clinical decision-making as follows:

- training of NHS and Public Health Wales healthcare professionals throughout Wales, using the Cardiff 'three-talk model' to support improved SDM in their organisations;
- embedding of SDM into clinical practice in the Musculoskeletal Physiotherapy service (Aneurin Bevan Health Board), with agreement in place for this to be expanded across the dental workforce across Wales (Covid-19 impacted);
- new UK SDM policies and international standards for the creation of patient decision aids in the US, Canada and Norway.

4.1 SDM training in NHS Wales

The Cardiff team worked with NHS Wales to embed and improve SDM as part of Public Health Wales' 'Making Choices Together' programme (2018-2020) **[5.1]**. Maria Gallagher, Senior Service Improvement Lead for Making Choices Together, confirmed: "*The Cardiff team's understanding of the barriers to the adoption of shared decision making…as well as expertise gained through development of patient decision aids and the 3 Talk Model…provided a strong foundation from which to deliver the programme*" **[5.1]**.The Cardiff team developed a training package based on the 'three-talk model' **[3.1, 3.3]** which Gallagher stated was "*delivered to two cohorts [between 2018-2020] using the 'train the trainer' approach* **[3.3]**, *with 80 NHS Wales and Public Health Wales staff attending. From our follow-ups, 52 of those staff were still actively delivering training."* **[5.1]**. Two more detailed examples of training aligned to Cardiff's research are as follows.

4.2 SDM embedded within clinical practice in Wales

Based on involvement in the Cardiff Train the Trainer programme, a number of Welsh health services now actively use Cardiff's SDM approach within their clinical practice:

a. Musculoskeletal Physiotherapy service, Aneurin Bevan University Health Board

Cardiff's training resulted in all 120 clinical staff in Aneurin Bevan University Health Board's (ABUHB's) Musculoskeletal Physiotherapy service being trained in SDM, with SDM now being used routinely throughout the service **[5.2]**. For example, SDM forms part of all mandatory

treatment pathways that lay out evidence-based treatment options for clinicians, with simple patient decision aids also used where available during consultations as recommended by the Cardiff research **[3.1]**. Rob Letchford (Clinical Lead, ABUHB Musculoskeletal Physiotherapy) noted that the training empowered clinicians "*to have early conversations with patients so they could understand the options and risks and make good decisions about their treatment"* **[5.2]**.

This approach also had a positive impact on interactions with patients and explanation of treatment options. Sam Haworth-Booth, ABUHB Musculoskeletal Service Manager, noted that before implementing Cardiff's SDM approach, the Musculoskeletal Physiotherapy service saw a number of patients reporting a lack of awareness about their treatment (particularly for knee replacements), including the risks, the short-term and long-term impact on their lifestyle, and likely outcomes **[5.2]**. To respond to this need, the team decided to trial an SDM approach through the 'three-talk model'. Haworth-Booth noted that *"Cardiff University's Three Talk Model and the training and support we received through Making Choices Together provided the necessary framework for us to implement shared decision making in our practice"* **[5.2]**. The approach was trialled in 2017/18 and rolled out in 2019 for all 100 clinical and support staff. It has also been integrated into the service's mandatory in-house postgraduate training for physiotherapy staff (approximately 20 per year), as well as the clinical reasoning training which all team members attend at least once per year **[5.2]**. Haworth-Booth noted that SDM has helped the Service to achieve "*better structuring of our initial contacts with patients and information sharing*", and a more consistent approach to outlining treatment options **[5.2]**.

b. The dental workforce across Wales

The Cardiff approach to SDM was also central in ongoing changes to dental services across Wales, which affect approximately 5,000 registered staff including dentists, hygienists, dental nurses and patients. Kirstie Moons, Associate Director for Dental Team Workforce Planning and Development for Health Education and Improvement Wales (HEIW), stated that the changes will improve patient services, and aims to take "*a more patient-centred approach to decisions about treatment"* as "*decisions have historically been taken by dental professionals and passed on to patients in a patriarchal approach"* **[5.3]**.

In 2018, the Cardiff team worked with HEIW's Quality Improvement (QI) Educators to develop Cardiff's training materials, described by Moons as "*fantastic*" **[5.3]**, into an online training package available to all registered dental staff. Moons stated that *"Cardiff University's research on shared decision making has produced a model that can be readily implemented in a clinical setting, supported by quality training materials*" and this was "*a key element underpinning the delivery of our service reforms"* **[5.3]**. The training was launched in November 2020 (delayed from summer 2020 due to Covid-19) and sessions with dental practices across Wales are now booked for 2021. A Prevention Plan leaflet for patients, based on the Cardiff approach to SDM, has been provided in digital format to all dental practices in Wales. Moons noted that all 5,000 NHS dental staff will be required to undertake the training as part of a contract reform process, and dental practices will be expected to evidence that they are using SDM **[5.3]**.

4.3 Influencing UK and international frameworks around SDM and patient decision aids

a. NICE guideline on shared decision making

Cardiff research influenced the development of the NICE guideline on shared decision making. Published in December 2020 for public consultation, the draft guideline (GID-NG10120) makes several recommendations based on Cardiff research, particularly in respect of embedding SDM at an organisational level **[3.1, 3.3, 3.4]**. The research influenced three of the key recommendations **[5.4**, pp6, 8-9**]**; for example, Recommendation 1.1.7 indicates that, as part of support for skills and competences, organisations should "ensure that training and development for practitioners in shared decision making includes the following: understanding the principles that support shared decision making based on the three-talk model" **[5.4**, p.6**]**.

The guideline goes on to explain the elements of the 'three-talk model' **[5.4**, p.14**]** and the value placed on the model by the guideline committee: "The committee heard expert evidence about using the three-talk model as a way to structure the shared decision making process and they agreed that the interventions that showed an effect were all consistent with one or more of the

stages of the three-talk model. As well as this, the committee agreed that the three-talk model was simple to understand and use and that made it useful in all healthcare settings" **[5.4**, p.19**]**.

b. Scottish Action Plan for shared decision making

Cardiff's approach to SDM is also cited in NHS Scotland's *Making it Easier: A Health Literacy Action Plan for Scotland 2017-2025,* published in 2017 **[5.5a]**. The Action Plan aims to improve people's health knowledge, in part through a move to a culture of SDM. It refers to the findings of the MAGIC Programme **[3.1, 3.2]**, specifically the need to embed the SDM process across healthcare teams **[5.5a**, p41**]**. The MAGIC Programme is also cited throughout the Scottish Government's *What Works to Support and Promote Shared Decision Making: A synthesis of recent evidence* document. Particular reference is made to the MAGIC project findings about barriers to SDM implementation, the skills and tools needed by clinicians, and the need for organisational buy-in **[5.5b**, p23**]**.

c. International Patient Decision Aid Standards (IPDAS)

The International Patient Decision Aid Standards (IPDAS) collaboration has defined best practice in the development, content and evaluation of patient decision aids globally since 2005. Paper **[3.6]**, which contains the minimum standards for patient decision aids, was adopted in its entirety by IPDAS as one of the three versions of its standards – referred to as version 4.0 **[5.6]**. In the UK, the NICE guidelines on shared decision making recommend that all staff working in healthcare settings have access to quality patient decision aids as assessed against IPDAS standards **[5.4,** p.11**]**. Additionally, IPDAS confirms that: "version 4.0 was used to inform the certification/approval programs established in different countries*"* **[5.6]**, for example:

- Washington State Authority passed legislation (prior to the REF period) that required patient decision aids to be evaluated using IPDAS; since April 2016, the State Authority has certified 41 patient decision aids, in areas such as maternity, joint replacement, end of life care and cardiac care **[5.6, 5.7]**.
- In Ottawa, patient decision aid developers must demonstrate that their aids meet the IPDAS criteria, before being approved by the Ottawa Patient Decision Aids Group **[5.6, 5.8]**.
- The Norwegian Directorate of Health also used IPDAS version 4.0 criteria to inform a set of quality criteria when reviewing patient decision aids for inclusion on the Norwegian health platform **[5.6, 5.9]**.

5. Sources to corroborate the impact (indicative maximum of 10 references)

[5.1] Testimonial: Maria Gallagher, Public Health Wales

[5.2] Testimonials: Aneurin Bevan University Health Board (NHS Wales) Musculoskeletal Physiotherapy team: Dr Rob Letchford (Clinical Lead), Sam Haworth-Booth (Service Manager)

[5.3] Testimonial: Kirstie Moons, Associate Director for Dental Team Workforce Planning and Development for Health Education and Improvement Wales (HEIW), NHS Wales

[5.4] NICE guideline on shared decision making (GID-10120)

[5.5] a. Making it Easier: A Health Literacy Action Plan for Scotland 2017-2025 - Action Area 3 (page 38, citation 52) **b.** Scottish Government's 'What works to support and promote shared decision making: a synthesis of recent evidence' document (Mar 2019)

[5.6] IPDAS criteria and checklists citing Cardiff's research

[5.7] Washington State Healthcare Authority use of IPDAS

[5.8] Ottawa Hospital use of IPDAS criteria including example of Ottawa Patient Decision Aid Inventory showing IPDAS criteria score

[5.9] Norwegian Health Directorate use of IPDAS criteria