Digital innovation to increase capacity for palliative care

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UNIVERSITY

Flinders University acknowledges the Traditional Owners and Custodians, both past and present, of the various locations the University operates on, and recognises their continued relationship and responsibility to these Lands and waters.

What I'm going to cover

Knowledge needs and care needs

Knowledge Translation

Digital Innovation

CareSearch's role is supporting evidence based care

Re-imagining and redesigning CareSearch

- Working with the sector

- Addressing audiences

- Using technology

Outcomes, impacts and possibilities

Knowledge Needs

- Health is a knowledge dependent industry. Knowledge for currency, for immediate care, for service development, for education and training

- Palliative Care is not just SPCS – acute care broadly; primary care; aged care; patients, carers and families; and general community (eg death literacy, grief)

- Knowledge needs to be available 24/7, current, trustworthy/evidence based, accessible, relevant and understandable

- Knowledge needs to be used if it is to be of value

Knowledge Translation (KT)

- Deals with moving knowledge/research evidence into practice to improve health care, health and health outcomes

- Proliferation of theories, models and frameworks that can provide insight and be used at individual, service and system level

- Increasing interest in KT in palliative care, particularly in relation to care provision in the non SPCS setting

- And an emerging interest in KT and the digital environment particularly about embedded knowledge (eg clinical decision systems), precision medicine, social media and education and training platforms

References

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Esmail R et al A scoping review of full-spectrum knowledge translation theories, models, and frameworks. Implement Sci. 2020 Feb 14;15(1):11.

Milat AJ, Li B. Narrative review of frameworks for translating research evidence into policy and practice. Public Health Res Pract. 2017 Feb 15;27(1):2711704

Öhlén J, Böling S, HamdanAlshehri H, Brännström M, Henoch I, Hessman E, Nilsson S, Ozanne A. Strategies for knowledge translation of a palliative approach outside specialized palliative care services: a scoping review. BMC Palliat Care. 2022 Mar 22;21(1):39.

Reimer-Kirkham S et al Translational Scholarship and a Palliative Approach: Enlisting the Knowledge-As-Action Framework. ANS Adv Nurs Sci. 2015 Jul-Sep;38(3):187-202

An ecosystem of evidence for translation

1. Evidence generation: identifying, accessing and appraising research evidence

2. Evidence synthesis: including systematic reviews and clinical practice guidelines

3. Evidence translation: needs access to evidence, contextual understanding, increased health literacy and workforce capability, moving to a virtuous circle

Cartabellotta A, Tilson JK. The ecosystem of evidence cannot thrive without efficiency of knowledge generation, synthesis, and translation. J Clin Epidemiol. 2019 Jun;110:90-95

What do we mean by digital innovation?

A fourth industrial revolution is building on the third, the digital revolution that has been occurring since the middle of the last century. It is characterized by a fusion of technologies that is blurring the lines between the physical, digital, and biological spheres.

Economic Forum (2016) The future of jobs. employment, skills and workforce strategy for the fourth industrial revolution

- Use of digital technology and innovation:
    - Improve business processes and workforce performance
    - Improve user/customer experience
    - Introduce new products and business models

DATA NEVER SLEEPS 8.0

How much data is generated *every minute*?

2020 every MINUTE of the DAY

PRESENTED BY DOMO

ZOOM HOSTS 208,333 PARTICIPANTS IN MEETINGS

REDDIT SEES 479,452 PEOPLE ENGAGE WITH CONTENT

NETFLIX USERS STREAM 404,444 HOURS OF VIDEO

DOORDASH DINERS ORDER 555 MEALS

INSTAGRAM USERS POST 347,222 STORIES

FACEBOOK USERS UPLOAD 147,000 PHOTOS

YOUTUBE USERS UPLOAD 500 HRS OF VIDEO

WHATSAPP USERS SHARE 41,666,667 MESSAGES

TWITTER GAINS NEW USERS 319

$3,805 IS SPENT ON MOBILE APPS

CONSUMERS SPEND $1,000,000 ONLINE

1,388,889 PEOPLE MAKE VIDEO/VOICE CALLS

MICROSOFT TEAMS CONNECT 52,083 USERS

AMAZON 6,659 SHIPS PACKAGES

FACEBOOK USERS SHARE 150,000 MESSAGES

INSTAGRAM BUSINESS PROFILE ADS SEE 138,889 CLICKS

SPOTIFY ADDS 28 TRACKS TO ITS MUSIC LIBRARY

VENMO USERS SEND $239,196 WORTH OF PAYMENTS

TIKTOK IS INSTALLED 2,704 TIMES

LINKEDIN USERS APPLY FOR 69,444 JOBS

GLOBAL INTERNET POPULATION GROWTH 2014–2020 (IN BILLIONS)

2014 — 2016 — 2018 — 2020

Learn more at domo.com

CARESEARCH® palliative care knowledge network

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Palliative Care Digital Readiness

The most common types of DHIs involved videoconferencing or videophone (17%), EHRs (16%) and telephone or mobile phone (13%). Online interventions, including educational websites and online courses, were described in 31 publications (9%). Only six publications were focused on social media (2%)

Finucane, A.M., O'Donnell, H., Lugton, J. et al. Digital health interventions in palliative care: a systematic meta-review. npj Digit. Med. 4, 64 (2021)

Few respondents reported access to patients' advance care planning data in the My Health Record system (13%), or the ability to update these data (n = 8). Other than commonly used ICT hardware and electronic mail applications, the digital technologies mostly used by palliative care providers were clinical information systems (73.4%), mobile devices (66.2%), SMS text messaging (63.6%), teleconferencing (55.8%), and Wi-Fi (55.2%). Digital health technologies or applications were most often used for the purpose of communicating with other health professionals (87.0%), accessing web-based or mobile health palliative care resources (76.0%), collecting or managing patient data (70.1%), and providing information (66.2%) or education (64.9%)

Mills, J., Fox, J., Damarell, R. *et al.* Palliative care providers' use of digital health and perspectives on technological innovation: a national study. *BMC Palliat Care* **20,** 124 (2021).

CareSearch's role

Provides palliative care evidence and tools for health and aged care professionals and information about death and dying for everyone

Available 24/7, online and open access

A core relationship with evidence

Recognises diversity of care setting

Acknowledges dying occurs across the life-course and across the community

Initial web architecture and project activity informed by the Knowledge to Action Framework. Acknowledged digital as a KT context

Our 2020-2023 Challenge:
How do we re-imagine CareSearch to support knowledge access and use?
How do we address digital developments and respect diverse users?

We're creating a new CareSearch portal

Developing new CareSearch

Consider KT, audience diversity, sector readiness, and digital contexts

- Examining usage patterns
- Identifying contexts and users
- Working with our community
- Understanding standards and best practice
- Review and develop content
- Pushing the technology
- Building in metrics and measures
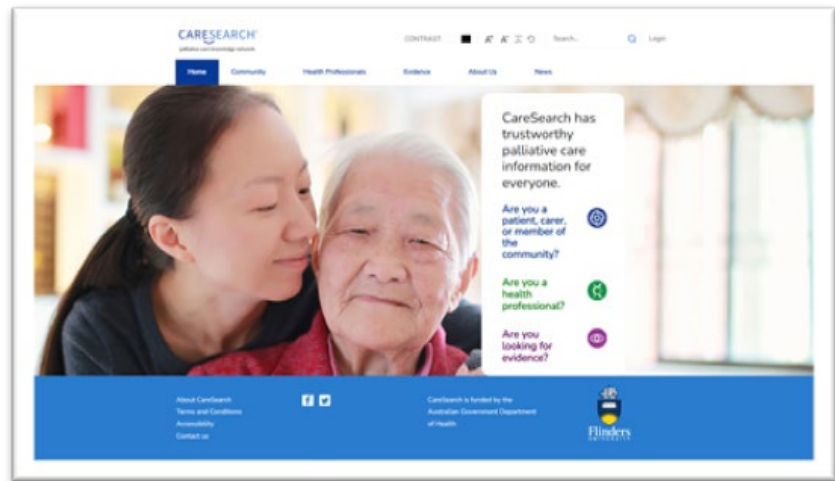
CareSearch Usage

- Examination of section and page views
- Site search analytics
- Google analytics

Broad user groups

Diverse set of knowledge needs

High level of use

Section	Total		Average views per page	Total number of pages
	Views	Visits		
Patients, carers, and families	3,276,870	1,566,347	23,235	141
Nurse Hub	2,569,538	1,265,224	25,417	102
Clinical Evidence	2,112,403	1,102,046	27,499	77
Finding Evidence	1,432,790	645,943	30,152	47
Allied Health Hub	1,244,522	533,537	22,226	56
GP Hub	1,096,256	498,617	22,844	48
Researchers Hub	663,768	303,298	19,522	33
Education	638,891	302,328		
Indigenous Hub	568,717	240,893	19,625	28
All sections/Hubs	NA	NA	24,248	NA

Contexts and Users

- Those providing care,
  those affected by need for care

- Engagement project findings

- Project partners

- Diversity of population

Moving to three interdependent Centres

Working with community

Governance
- National Advisory Group

Expert working groups
- Evidence Review Group
- Community Review Group
- Primary Care Review Group
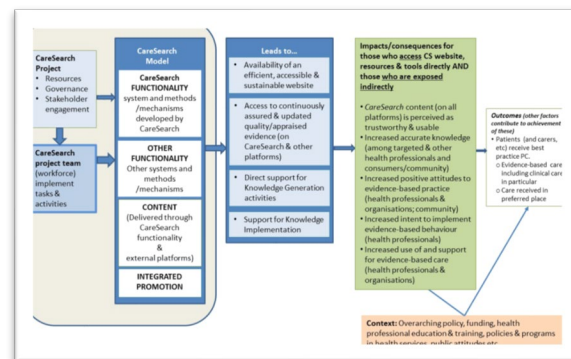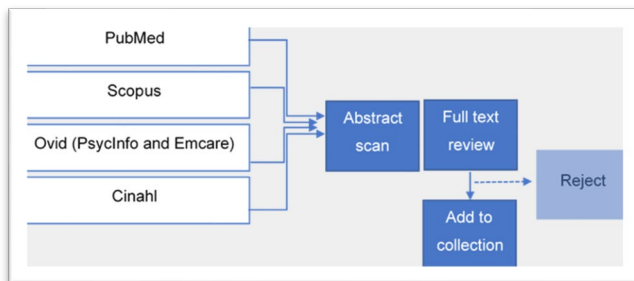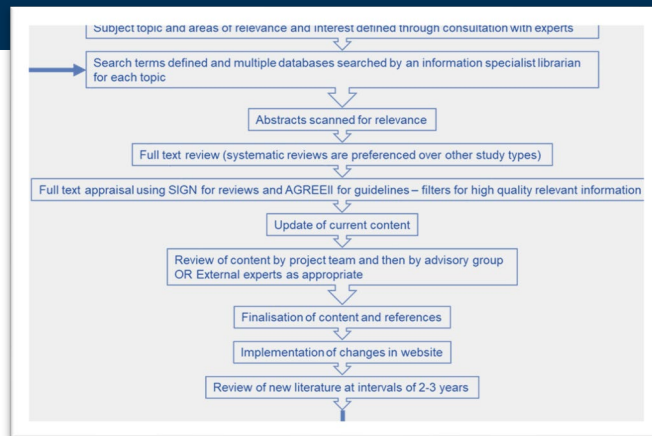
Formalised partner relationships
User feedback processes
- Feedback boxes and requests
- Call for user testers
- User testing

Standards and best practice

- Program Logic model to guide activity and support evaluation

- Formal quality processes

Pushing the technology

- Addressing accessibility (WCAG 2.0)
- Review of platforms and applications
- Responsive design embedded
- Exploiting research relationships in usability and content design
- Enabling integrated brand and communications
- Information in diverse forms (Text, video, podcasts, animation)
- Building interactivity
- Embedding data points
- Facilitating mobility of knowledge

Outcomes, impacts

- 150,000 visits per month since launch

- Bounce rate dropped to 7% (meaning 90% of visitors go on to look at a second page within the website)

- Interactivity is being used as indicated by downloads of fill-in-able forms, emailing to self of content, contribution to datasets

- Indications of data informing future communication strategies

- Contacts and approaches for information, resources and joint activities (eg presentations, guidance and advice)

Conclusion

- Evidence for use by clinicians and for service development is available
- Evidence to support patient and carers in planning and decision making is available
- Formal quality processes support authority of content
- User participation facilitates relevance and dissemination pathways
- Barriers to use reduced by 24/7 availability and digital accessibility
- Tools and resources mean that evidence is "pre-packaged" for use
- Access rate indicate successful push strategies and relevance of content for users

CareSearch is free to use and available at:

www.caresearch.com.au

palliAGED is free to use and available at:

www.palliaged.com.au

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