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Title

Health journalism - evolution and innovation in the digital age

Introduction

News media coverage can set the public agenda, frame issues and influence knowledge, attitudes and behaviour (Jordens, Lipworth, & Kerridge, 2013; National Science Board, 2016; Walsh-Childers, 2016) (NSB: Ch.7.p.26). However, traditional producers of high quality health news face reduced resources, smaller reporting teams, and rival sources of information including social media, blogs, YouTube, podcasts, advertising, etc. (Ioannidis, Stuart, Brownlee, & Strite, 2017; National Academies of Sciences, 2017; Schwitzer, 2009). Audiences, especially younger people, are drifting away from television and newspapers towards online sources such as Facebook, Google, and social media (National Academies of Sciences, 2017). However, as Junkee founder Tim Duggan says, online media do pay attention to audiences' concerns, which, among younger audiences, include: "my career, my money, and my *health and wellbeing*" (Carson & Muller, 2017) [*emphasis added*].

Health journalism is under pressure from redundancies of experienced health journalists, compulsion to generate more news in less time to meet the demands of the 24-hour news cycle, and the globalisation of news (Jordens et al., 2013; National Science Board, 2016; O'Donnell, Zion, & Sherwood, 2016; Schwitzer, 2009; Su, Akin, Brossard, Scheufele, & Xenos, 2015). Journalism that is accurate, independent and critical is vital to maintaining a well-informed public as a foundation of democracy and good health (Jordens et al., 2013; Picard & Yeo, 2011). Increasingly, trust, emotion and compelling narratives are also needed to reach audiences in the competitive attention economy (Goldhaber, 1997; Maksimainen, 2017). Building on innovations in public journalism (Rosen, Merritt, & Austin, 1997) and civic journalism (Kurpius, 2002), scholars and journalism educators are now arguing for an even greater focus on community and on listening more to and working with citizens to generate journalism with social impact (Jarvis, 2014; Schwitzer & Fleck, 2017).

Health news makes up a small percentage (one to two per cent) of network nightly TV news coverage in the USA and evidence suggests such coverage has been falling since 2001 (National Science Board, 2016) (NSB: Ch.7.p.28, Figure 7.5). A multi-platform (print, online, TV, radio) analysis found health and medicine news consistently made up a greater percentage of the news than science but the proportion had fallen from 8.9% in 2009, to 3.1% in 2011 (National Science Board, 2012). The quantity of USA coverage of health was influenced by discussions of health care reform in 2009 (Shah, 2011b). Preliminary findings from Australia suggest a 29 per cent reduction in three leading newspapers' coverage of health and science (2005 to 2014) (Bonfiglioli, 2017). These newspapers' coverage of major health issues (cancer, heart disease, obesity, dementia and diabetes) fell 31 per cent from 4,695 articles in 2005 to 3,226 in 2014 (Bonfiglioli, 2017).

American Press Institute executive director Tom Rosenstiel has noted that newsroom cutbacks were likely to focus on beats (rounds) where editors expected audiences could go elsewhere for information such as health (Shah, 2011b) and Poynter Online's Rick Edmonds has stated that newsroom cutbacks were affecting science reporting: "The overall field of science in health journalism has declined a lot. A lot of [news] papers have decided for many reasons -- they don't have enough space, they're trying to trim their staff -- that they're not going to do much on pure science research" (Shah, 2011a). Health news was evolving from stories quoting experts to self-help, fitness and consumer news you can use, Edmonds noted (Shah, 2011a). While Australian and US research has found evidence of improvement in the quality of health journalism (Walsh-Childers, Braddock, Rabaza, & Schwitzer, 2016; Wilson, Bonevski, Jones, & Henry, 2009), recent redundancies are likely to have a negative impact on quality (Dobbie, 2017; Newman, Fletcher, Kalogeropoulos, Levy, & Nielsen, 2017). Reductions in coverage may serve to diminish the importance of health in minds of policy makers and the wider public (National Academies of Sciences, 2017). And, as Schwitzer and Dobbie have noted, digital disruption is driving demands that journalists research more stories and report in multimedia formats (Dobbie, 2017; Schwitzer & Fleck, 2017).

Despite these challenges, health journalism continues to play an influential role in the lives of many citizens (Maksimainen, 2017; Walsh-Childers, 2016) and professionals, organisations, innovators, and champions of health journalism are collaborating to defend health journalism as a specialism dedicated to evidence-based reporting in the public interest. Current scholars are researching and innovating within the specialism of health journalism to help health journalism to develop to meet the demands of changes in technologies, communities, audiences and producers (Bruns, 2006). Scholarship on the history of "medical journalism" has tended to focus on the reporting of medicine in academic journals. However, Australian newspapers began to carry medical news as early as 1804 when Dr Thomas Jamison published a note on vaccinating children against smallpox in the *Sydney Gazette*, a state government newspaper (Furlan, 2015). Early health-focused articles in almanacs and newspapers tended to be written by doctors not journalists (Horrocks, 2008). The earliest would-be specialist medical journalists were professionals keen to overcome the gap between medicine and the public and, by carving their new niche in journalism, they became the bridge builders (Marchetti, 2017). However, as Marchetti explains, journalists wanting to report on medicine like other news topics at first faced an uphill battle against medical professionals and others with vested interests in controlling the dissemination of medical information (Marchetti, 2017). Specialist health journalism now exists within the evolving sub-field of journalism -- part of what Bourdieu identified as the field of cultural production (Champagne, 2005; Marchetti, 2004).

The challenges of the specialism's early development have evolved to pose new challenges to health journalists today. These challenges provide the focus of the special themed issue of *Australian Journalism Review*. They include source-dependency (Furlan, 2017; Holland, 2017; Romano & Moran, 2017), the clash of cultures between medicine and the media (Holland, 2017; Marchetti, 2017), neglect of socio-environmental drivers of health and illness (Hinnant, Subramanian, & Jenkins, 2017), patchy application of critical appraisal skills (Furlan, 2017), neglect of public voice and agency (Holland, 2017), reporting in developing nations (Romano & Moran, 2017), verification (Romano & Moran, 2017), and the ocean of health information which high quality evidence-based health journalism must navigate to reach citizens (Higgins & Begoray, 2012).

Two Australian responses to such challenges are presented in this special issue: the social journalism project #justjustice tackling over-incarceration of Aboriginal and Torres Strait Islander peoples (Williams, Finlay, Sweet, & McInerney, 2017) and an innovative social

journalism model centring on the online health news website Croakey.org (Sweet et al., 2017).

The negative and positive impact of digital disruption and social media on health news and information is investigated in depth by Steffens, Dunn and Leask (Steffens, Dunn, & Leask, 2017). The local and international initiatives already launched to overcome the challenges and build capacity in health journalism are explored by health journalism pioneer Barbara Gastel (Gastel, 2017). The crucial area of health policy journalism and its impacts is investigated by Walsh-Childers (Walsh-Childers, 2017) who offers a tool for analysing such coverage and maps out new research pathways to investigate the impact of news on health and health policy.

Although health journalism is well established as a specialism within journalism today, it is useful to consider the battles of the first medical journalists for space, legitimacy and professionalism when seeking to understand the challenges of digital disruption."

Marchetti's investigation (Marchetti, 2017) shows how journalists at *Le Monde* developed their sub-field within this elite newspaper in struggles for cultural capital with science journalists, government officials and medicos keen to keep health communication in medical hands. Drawing on interviews with health journalists, the history of *Le Monde*, the sub-field of health journalism and previous research, Marchetti sheds light on journalists' successful battle to report on health and medical information like other news topics. Many medical professionals held the view that health and medical research information should be communicated only by doctors, while governments and health authorities expected journalists to report on their health campaigns as a public service. Coming from science, arts or medical backgrounds, gradually the specialism of health journalism developed earning specialist sections in leading newspapers.

Four articles focus on current problems that health journalists face. Apart from the obvious institutional and structural constraints of the 24/7 newsroom with its diminishing resources and trained specialists, these articles highlight key issues namely - an over reliance on 'expert' views, almost to a reverential degree (Furlan, 2017; Holland, 2017); an over emphasis on the individual determinants of health while omitting other key influential factors such as the social, environment, economic, political and cultural drivers (Hinnant et al., 2017); the influence of digital media upon the production circulation and consumption of health news (Holland, 2017) and the ongoing need for training (Romano & Moran, 2017).

Hinnant and colleagues (Hinnant et al., 2017) explore challenges faced by health journalists that result from the demands of media logic, a conceptual framework that describes a routinized, habitual means of constructing news media messages. One key 'logic' is the focus on individual determinants of health, which precludes the exploration of fundamental, complex, socially determined causes of health problems. This is a problem that affects coverage of nearly every health topic. It means behaviour and lifestyle are treated as both the cause and solution for many problems. This can lead to coverage that focuses more on superficial causes of social problems instead of structural determinants. Indeed, media logic provides a valuable framework to understand how health journalists navigate their beat and the barriers they face.

Health reporters not only influence public understanding of the latest health debates, but also individual health care choices and behaviours. Yet, as Furlan (Furlan, 2017) argues, one major criticism levelled at health journalists is that journalists who cover health and science rely heavily on scientific journals as the main source for story ideas, and that many news organisations regard research published in medical journals as infallible, with

a publication bias in favour of positive findings. The article reports on the findings from interviews the author conducted with health writers and their public relations resources within Australia that confirm these criticisms. It found only a minority of reporters enacted watchdog vigilance on stories of medical research, and that the majority of journalists appeared to suspend routine verification strategies and critical evaluation of claims when dealing with information provided by “elite” sources such as research papers published in highly regarded scientific journals.

Kate Holland draws upon the concept of biocommunicability developed by Briggs and Hallin (Briggs & Hallin, 2010) as a lens through which to examine the ways in which journalists position themselves and other social actors in the construction of health news. There are three dominant models. The first, the biomedical authority, is where health experts and scientists are the source and holders of knowledge that journalists are expected to transfer to members of the ‘lay’ public. In the patient-consumer model, journalists adopt a more flexible positioning in producing reports that also invite readers and viewers to consider the range of options available for understanding and acting on their health. The third, the public sphere, addresses media audiences and publics as first and foremost engaged citizens and focuses more on the environmental aspects of health rather than blaming individuals. In her article, Holland engages the question of how digital media may work to enable and constrain biomedical authority, patient-consumer and public sphere orientations to health journalism.

Romano (Romano & Moran, 2017) takes a broader international view and examines issues that affect the quality of health journalism in developing nations, and presents the findings from a textual analysis of Indonesian media reporting of a polio crisis that identified five core problems. These included fact checking, newsworthiness, burying the lead, sensationalism, and contextualization of facts and allegations. These findings reinforce the conclusions of research by the Health Journalism Partnership (HJP), which conducted a global survey of 422 organizations engaged in health journalism support and 16 in-depth country analyses. The HJP found that health journalism in developing nations was regularly sensational, inaccurate, shallow and reactive, and such journalism was driven largely by announcements or health promotion campaigns, without investigative depth. One immediate solution is long-term training programs that boost overall skills such as accuracy, balance and responsibility.

In response to some of these challenges and recognising that the media might be contributing to ill health and inequality among Aboriginal and Torres Strait Islander peoples (Sweet, 2009) health journalists and researchers are investigating ways social journalism and decolonising practices can be used to address inequalities and the pervasive media bias experienced by Aboriginal and Torres Strait Islander peoples (Sweet et al., 2017; Williams et al., 2017). Williams and colleagues present a case study of #justjustice, an Aboriginal-led social journalism innovation tackling the intransigent issue of over-incarceration of Indigenous Australians (Williams et al., 2017) while Sweet and colleagues present an innovative social journalism model illustrated by case studies (Sweet et al., 2017).

Arguing that the scope of health journalism needs to take in social and structural determinants of health, Sweet and colleagues outline a ten-point model for social journalism, presenting five case studies of health journalism published on the online platform Croakey.org. These case studies show how using decolonising and participatory action frameworks can transform journalism research and practice, with potential benefits for the health and wellbeing of Australians, especially Aboriginal and Torres Strait Islander people. Innovation in journalism is necessary to address the systemic impact of a journalism which normalises whiteness and contributes to exclusion,

silencing, stereotyping, and negative framing of Aboriginal and Torres Strait Islander peoples. Building on Jarvis's concept of social journalism as a listening practice (Jarvis, 2014), Sweet and colleagues outline a model of social journalism that is founded on connectivity. Other key elements of the model are: standpoint; relationships; responsive listening; reflexivity; immersion; transparency and trust; innovation; and an ethic of service. Innovations presented in these case studies include: #IHMAYDay (Indigenous Health May Day) in which Aboriginal and Torres Strait Islander people Tweet about health, determinants of health, and decolonisation, @WePublicHealth (a public health focused account with rotating tweeters), and #CroakeyGO an initiative of walking journalism which encourages connection to country, focuses on planetary health and draws on the cultural capital of the Croakey connective.

Williams and colleagues draw on Patton's 2015 case study methodology and the Ngaa-binya evaluation framework, an Aboriginal methodology for analysing success, in their analysis of how the #justjustice initiative investigated and reported on strategies to reduce over-incarceration. Central to social journalism (Jarvis, 2014) is working closely with relevant communities and this ties in with decolonising approaches which focus on respect for the cultures, strengths and knowledges of Aboriginal and Torres Strait Islander people, privilege the voices of people of these communities, and deconstruct white privilege (Williams et al., 2017). The crowd-funded, multi-media and highly collaborative #justjustice initiative highlighted the depth of social and cultural capital among Aboriginal and Torres Strait Islander communities and arguably represents a watershed event in the development of social journalism in Australia, building on the ground-breaking Croakey innovation in social journalism (Sweet, 2013; Sweet et al., 2017; Sweet, Simon, Ray, & JH, 2009). As Williams and colleagues describe, #justjustice created new networks, published journalism by more than 70 people from a variety of backgrounds, engaged about 5000 people on social media, drew in Federal Minister for Indigenous Health and Minister for Aged Care the Honourable Ken Wyatt AM, attracted mainstream and Indigenous media attention and publication, and sold more than 5,500 copies and e-copies of the resulting book (Finlay, Williams, McInerney, Sweet, & Ward, 2016) (The second edition is available here: <https://croakey.org/download/43883/>) Key insights from Aboriginal and Torres Strait Islander people about how to reduce over-incarceration -- see Box 2, (Williams et al., 2017) -- were incorporated into the #justjustice portfolio of journalism (Williams et al., 2017). The scholars conclude by highlighting the importance of connection, trust, self-reflection, and reciprocity in social journalism, communicating the lived-experiences of pertinent people and addressing over-incarceration which continues to be a public health crisis in need of greater, more effective, more culturally appropriate action.

While digital disruption and social media may be having negative impacts on health journalism, Steffens, Dunn and Leask (Steffens et al., 2017) shed light on the positive impacts including the opening up of the online sphere to a much wider range of voices. They examine how the advent of social media has re-shaped how the public seek and receive health information and the impact of digital disruption on mainstream media and health journalism (Steffens et al., 2017). Mainstream media continue to set the health news agenda with specialist health journalists providing higher quality and more independent journalism. However, health journalism appears threatened by cuts to staff (O'Donnell et al., 2016), reductions in mainstream newspaper coverage of health and science (Bonfiglioli, 2017), greater dependence on press releases, and increases in the proportion of health journalism performed by non-specialist journalists who may lack expertise in evaluating health information. Vested interest-sponsored information, fake news, low-quality information, echo chambers, and social media proliferation pose great challenges to the public's chances to receive reliable health information, for example about vaccination. Incorrect information can persist in the public mind in ways posing

threats to health. The good news is that the internet provides important opportunities for communicating high quality information and nurturing support networks for people with diseases. These challenges can be addressed by journalists, health experts, governments, and the public assisted by innovative automated fact-checking software, they argue (Steffens et al., 2017). Health experts can assist by developing their media skills and availability, evaluating media releases on their work, contributing to public interest journalism and partaking in social media conversations. Governments can support health journalism and health media literacy. Steffens and colleagues argue that while social media may spread misinformation, users can also create, curate and communicate reliable information and champion evidence-based decision-making just as Wikipedia draws on the wisdom of crowds to create, curate and cross-check factual information. Journalists will need to work with governments, health professionals, researchers and the public to use emerging technologies to identify, evaluate and share high quality health information.

Health journalism pioneer Barbara Gastel analyses initiatives to develop capacity for health journalism in both specialist and general reporters (Gastel, 2017). Reporters face barriers in health journalism including lack of access to research, especially local research, and education in how to find, make sense of and evaluate health information. They may lack colleagues to learn from, support from editors, knowledge about how to reach experts, and face researchers who may be reluctant to be interviewed. Digital disruption may have reduced financial resources for medical journalism but the internet greatly enhances the range of health information reporters have access to from countries with open internet and enhanced mutual support amongst health reporters. International initiatives to build health and science journalism through education, mentoring, journal mentoring, news evaluation, and media training have borne fine fruit. These include: topic guides, MOOCs, science media centres, awards, new science or health beats, sections, or magazines, formation of professional associations and wider publication of developing countries' health research. Gastel proposes future developments could include a centralised online library of existing resources, analysis of neglected areas, development of resources to fill these gaps, online or email discussion groups, a field-specific blog, library support for finding and evaluating information, units of study and other resources to support health journalism education. Key areas for development include capacity building in non-health journalists, editors, and health and medical researchers. While the challenges facing innovations and evaluations in health journalism are considerable, Gastel concludes that "the digital era offers opportunities to collaborate worldwide in fostering high-quality health journalism" (Gastel, 2017).

One of the major challenges health journalism faces is to find and tell compelling stories about chronic disease and ongoing public health problems which require repeated efforts to raise awareness among each new generation of the public and policy makers tempted to focus on the vote-grabbing issue of health service delivery which tends to over shadow prevention (Rachul & Caulfield, 2015). As Walsh-Childers notes, prevention and public health policy require community support to underpin policy makers' decisions and public support is likely to be driven by, inter alia, news media representations of issues and presentation of policy relevant facts (Barabas & Jerit, 2009; A. Davis, 2007; Entman, 1996; Walsh-Childers, 2017). However, as Walsh-Childers notes, the precise role of the media in framing such policies in terms of benefits and harms, costs and evidence has not been investigated. In this issue Walsh-Childers presents an innovative tool for analysing news coverage of public health policy and maps out a research avenue to investigate the impact of news on policy in this area. Evaluations should assess how coverage tackles: costs to individuals and taxpayers, evidence-based assessment of benefits and who would enjoy them, harms and who would face these, efforts to draw on other countries' experiences, quizzing of proponents to provide evidence supporting the policy,

disclosures of vested interests, and inclusion of comments from independent sources. The extent of the problem the policy is designed to address should be included (here Walsh-Childers refers to drug testing of welfare recipients despite their low prevalence of drug use -- a policy recently threatened in Australia / NSW). Coverage should include policy details, alternative policies and the likelihood of the policy being implemented and how this was done elsewhere (Walsh-Childers, 2017).

To illustrate the significance of this issue, Walsh-Childers points out the poor understanding young and low-income people have of Obama's affordable care act and its proposed repeal. Walsh-Childers proposes a research agenda to investigate how news media coverage meets these criteria, what barriers health Journalists face in reporting health policy, journalists' sourcing strategies, and surveys to investigate how news audiences learn about health policy, experiments to explore influence of news types on opinion, and developments in the training of journalists and information subsidies offered by health experts. Walsh-Childers concludes journalists and health experts have an obligation to improve coverage to assist citizens.

Conclusion

Health journalism is in the eye of the digital disruption maelstrom, lit up here and there by new voices, new conversations and innovative journalism. High quality health journalism is persisting and evolving despite these challenges: by parts through social journalism projects, by parts through vocational commitment. Innovative niche journalism and mainstream journalism's memory of the appeal of these stories for their audiences may see health journalism into the tough new era of quality journalism. However, active support, mentoring and innovation are required to protect health journalism from sponsored information subsidies, job cuts, and a race to the bottom. The endless fascination with the topic, the need for excellent and compelling journalism to satisfy readers' needs and interest, and the ingenuity of existing and incoming practitioners and health and media researchers point to a future full of challenge but not one overwhelmed with pessimism. Everybody has a body and, in these days of fake news, readers, viewers and listeners will continue to demand and contribute to authoritative, evidence-based, compelling news and features through whichever news delivery models meet their needs. Health journalism may be one of the types of public interest journalism in need of new models of support (Dodd et al., 2017). But apparent disinvestment in health journalism may be mitigated by education in critical health media literacy for citizens, journalists, citizen health journalists, and health professionals (Bonfiglioli, 2017; S. Davis, 2017; Ioannidis et al., 2017; Luce, Jackson, & Thorsen, 2017). To protect and enhance the health of the public, reliable, engaging, and useful health journalism is necessary and desirable

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