Evidence-based Policy Making and COVID-19: A Case Study of Water Service Delivery in eThekwini Municipality

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Abstract
Within the context of South Africa, access to water and sanitation remains a challenge 26 years into democracy. Coupled with the risks and challenges presented by COVID-19, municipalities, as implementers of water and sanitation policy, have been required to respond quickly, with great efficiency, in order to assist government with its response strategy. The logic of evidence-based policy making is that it seeks to enhance the capacity of policy decision makers to respond to risk, and adjust decisions accordingly, for effective and efficient public policy implementation. This article seeks to reflect on the extent to which evidence-based policy making informs decision making within the water and sanitation sector of South Africa, through a case study of eThekwini Municipality. Secondly, the article seeks to reflect on the extent to which the policy responses by the municipality to COVID-19, have been driven by evidence. The article is informed by some of the findings of an empirical investigation conducted by way of a mixed methodology approach by one of the authors as part of a PhD investigation. The article concludes that, whilst the respondents recognize the potential role of evidence in improving policy decision making, there is limited application due to lack of capacity. The effectiveness of evidence-based policy relies largely on existing or stable public policy issues, for sustained impact, rather than policy decision making during a crisis.

Keywords: Evidence-based policy, water and sanitation, public policy, COVID-19
Introduction and Background
Public policy is viewed as,

an instrument of government which reflects a willingness or unwillingness on the part of government to act on particular issues that affect society (Dye 2013; Anderson 2011; Birkland 2011; Howlett & Ramesh 2003; Cloete, Wissink & de Conning 2006).

In its simplest interpretation, as outlined by Lasswell, public policy outlines the problem orientation and response strategy adopted by governments, whilst the politics element determines ‘who gets what, when and how’ (Cloete et al. 2006). In an era of populism and political manoeuvring, the need for public policies to be designed and implemented in a manner that delivers effectively and efficiently is critical. The starting point is that governments should have sufficient understanding of the environments of their citizens, and their needs, in order to be responsive through relevant public policies, and their implementation strategies. In other words, governments should ideally have information or evidence that suitably guides public policies. One such policy area is the provision of water, a Universal Right. This right, is entrenched further in the Sustainable Development Goals Target 6.1, which expressly identifies the importance of access to safe and affordable drinking water for all. This target recognizes that water is life (UN 2018:11), because achieving this right is considered to be a catalyst in the attainment of other basic necessities of life such as environment, economy, health, to name the few. In 2018, the Sustainable Development Goal 6 Synthesis Report on Water and Sanitation (2018) by the United Nations, indicated that globally 844 million people (11%) still lack access to basic water services (UN 2018: 11-13).

When the first case of COVID-19 was reported in South Africa, by the National Institute for Communicable Disease (NICD) on 5 March 2020, the response by His Excellency, President Cyril Ramaphosa, was to declare the coronavirus pandemic a national disaster in terms of the National Disaster Management Act, 2000. By 23 March 2020, he announced a national lockdown and a package of extraordinary measures to combat this public health emergency. At the time, there were 402 confirmed COVID-19 cases in South Africa. The proposed measures were implemented through the introduction of regulations as required by the National Disaster Management Act. In response to the
pandemic, and taking lessons learned from China, it was evident that stringent hygiene practices is one of the preventative measures in dealing with the spread of the pandemic (WHO 2020; Presidency 2020). As part of its policy response, which included the issuing of lockdown regulations, South Africa advocated for stringent hygiene practices with an emphasis of the washing of hands with water and soap, for at least 20 seconds. In considering the policy position, it is important to note that globally, improving Water, sanitation and hygiene (WASH) is considered to have the potential to deter at least 9.1% of the disease burden and of the total burden of ill-health preventable by improvements in WASH. However, even though the provision of improved water supply and sanitation facilities make it effortless to practice good hygiene, on their own they are not sufficient to significantly decrease morbidity and mortality rates. Hand washing with soap at critical times, has been proven to reduce the prevalence of respiratory infections (Water Aid 2012). On the surface, the idea of promoting the washing of hands is a simple thing to do. However, within the context of South Africa, where 11% of households still do not have access to running water 26 years post democracy (StatsSA 2019), despite policy provisions (Mohamed Sayeed & Matha 2019), it was critical that measures were implemented to ensure access to water by all citizens. The pandemic thus required an immediate and rapid response to the current reality, with the looming possibility of a catastrophe. It was necessary for government to consider the evidence being presented in terms of the pandemic and the realities of South Africa, in order to identify and implement suitable policy responses.

Governments have thus been using evidence as the source for decision making during the pandemic. From monitoring the prevalence of cases, through the contact and trace systems, to mapping out measures to ensure the basic resource for combating the virus is available, water. The aim of this article is to examine the extent to which evidence-based policy making informs decision making within the water and sanitation sector of South Africa, and to reflect on the extent to which the policy responses by the municipality to COVID-19, have been driven by evidence, through a case study of water service delivery in eThekwini. The article is informed by some of the findings of an empirical investigation conducted by way of a mixed methodology approach by one of the authors as part of a PhD investigation. The methodology adopted in the article is twofold. It is important to note here, that this article was written 100 days after the first case of coronavirus patient was recorded in South Africa.
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Research Methodology
The methodology adopted in the article is three-fold. Firstly, the article reflects on the findings of an empirical study into the use of EBP within the municipality. The aim of this study was to investigate the extent in which evidence informs the implementation of water and sanitation policies. The study interrogated the three key questions, however, only one is considered in this article namely: What is the extent of evidence use currently in policy making at the Department of Water and Sanitation? The PhD study adopted a mixed methodology approach. Firstly, 13 qualitative semi-structured interviews were conducted with key policy informants, occupying policy making and oversight positions from institutions responsible for water and sanitation within the eThekwini Municipality. This included respondents from the National Department of Water and Sanitation, eThekwini Metropolitan Municipality, National Department of Cooperative Governance and Traditional Affairs, Water Research Commission and Pegasys Institute (an independent policy advisory service). The aim of these interviews was to capture the nature and understanding of EBP from the participant’s experiences, opinion and point of view. The rationale here, was that the experiences of those required to oversee the design of policies would be important. Secondly, a quantitative self-administered questionnaire was used to obtain opinions from the managerial employees at eThekwini Municipality, which is responsible for ensuring effective translation of policy objectives into actual water and sanitation delivery in terms of the Water Services Act, 108 of 1997. Here, 100 survey questionnaires were sent out to officials at task grade 14 to 18 from eThekwini Water and Sanitation Department, and was met with a 72% response rate. Data from both interviews and survey was analysed and consolidated into the pre-determined themes for effective interpretation. For the purpose of this article, only the findings relevant to policy knowledge and experiences of EBP are considered. The third element of this methodology was a qualitative analysis of the policy responses by the municipality to the challenges presented by COVID-19, and to reflect on the extent to which evidence informed the policy decisions. This aspect involved documenting the status quo of water and sanitation provision in eThekwini Municipality within the first 100 days of the COVID-19 lockdown period. It entailed studying municipal interventions from the National Department of Water and Sanitation as well as from the eThekwini municipality to ensure access to water and
sanitation in response to the pandemic, and to reflect on the extent to which evidence informed these decisions. But first, what is evidence-based policy making?

**Understanding Evidence-Based Policy Making**

*From Theory to Evidence-Based Policy Decision-Making*

Post the Second World War, the focus was on social problems, and ideas about public policy were influenced by the dominant Basic Needs Approach. In the 1950s and 1960s ideas about public policy were dominated by the Keynesian Economic Model, which incorporated socio-political and historical prevailing ideals as key drivers of public policies (Heineman, Bluhm, Peterson & Kearny 1997:14-16). The 1970s to mid-1980s witnessed the dominance of gender needs being integrated into public policies and resulted in the inclusion of the language of equity, anti-poverty and efficiency into public policies. The emerging focus during this period was that women’s strategic needs and role in change needed to be considered and incorporated into public policies, because of the potential positive impact of their inclusion (Karl 1995:94-96). The mid 1980s into the 1990’s saw the emergence and dominance of good governance as a key factor in service delivery (May 1997:1-3). During this period issues related to accountability, transparency and monitoring and evaluation became key. Beyond 1990s, the focus has been on democratizing decision-making in Africa and emphasizing on building capacity and developing responsive governments (Kayizzi-Mugerwa 2003:15). Currently, the language of evidence as a key driver for successful public policies prevails (Heineman, Bluhm, Peterson & Kearny 1997; Karl 1995; May 1997; Kayizzi-Mugerwa 2003). These shifts in broader thinking reflect an evolution from opinion or ideology-based policy making, as demonstrated in the evolution literature from 1950 to early 2000s, to evidence-based decision-making process from 2000s and beyond. Evidence has thus come to play a central role not only in evidence-based medicine, but also within the field of public policy (Sutcliffe & Court 2005; Head 2015; Ansell & Geyer 2017). Advocates of evidence-based approaches (Parsons 2002; Banks 2009; Head 2015; Howlett & Mukherjee 2017; among others) recognise the need to move away from using theories or and populism as sufficient grounds for decision making, to examining research evidence in order to inform decisions. The move to focus on evidence-based approaches in the early 2000s represents the current major
shift in the search for improved policy implementation and overall impact in society.

What is Evidence-Based Policy Making?
Evidence based practice finds its origin from the medical field, commonly known as Evidence Based Medicine, which was adopted as common practice as early as 1930 (Bouffard & Reid 2012: 2). The concept of ‘evidence-based policy making’ (EBPM) can be traced back to over a century ago in Britain (Davis 2004; Sanderson 2002; Head 2015), but was more recently made popular by the Blair Government administration, which was elected on a platform of ‘what matters is what works’, and aimed at ending ideologically-based decision making, and ‘questioning inherited ways of doing things’ (Freiberg & Carson 2010; Ansell & Geyer 2017; Sanderson 2002; Sutcliffe & Court 2005).

Evidence-Based Practice as an emerging paradigm is sometimes referred to as Evidence-Based Policy (EBP) (Sutcliffe & Court 2005; Davis 2004), Evidence-Based Practice (EBP) (Bouffard and Reid 2012), Evidence-Based Policymaking (EBPM) (Freiberg & Carson 2010), Evidence-Informed Policy making (EIPM) (Head 2015), and Evidence-Informed Decision Making (EIDM) (Head 2015; Langer, Stewart, Erasmus & de Wet 2015). Therefore, providing a comprehensively all-encompassing definition is particularly difficult. However, there is consensus on what the concept means in the specific field and context in which is being applied. That is, it refers to the practice in which decisions are taken based upon the best available evidence. Additionally, it is important to note that the definition of what count as evidence is dependent on the researcher’s assumptions, school of thought (Bouffard & Reid 2012) and context-based (Punton 2016). At the level of local government strategic planning, evidence includes ‘research evidence, practitioner expertise, and participant preferences, values, and goals’ (Bouffard & Reid 2012: 4). Governments have responded to the notion of the use of EBPM in various ways. Within the United Kingdom, the use of EBPM is common, and the notion of evidence in their practice is inclusive of expert knowledge; published research; existing research; stakeholder consultations; previous policy evaluations; the Internet; outcomes of consultations; costing of policy options; output from economic and
In the USA, EBPM was institutionalised with the foundation of the US Coalition for Evidence Based Policy in 2001, which aimed at increasing government effectiveness through the use of rigorous evidence about what works (De Marchi, Lucertini & Tsoukiàs 2014: 24). Marais and Matebesi (2012) assessed the level of evidence-based decision making in respect of the development of Provincial Growth and Development Strategies (PGDSs) in South Africa. Marais and Matebesi (2012) concluded that, evidence can be ‘official statistical data’, ‘official government policies’, ‘government research outputs’, and ‘scientific research from universities and non-governmental organizations’. This understanding however, excludes experts’ knowledge, stakeholder consultation, values and beliefs which this article considers as valuable evidence. In terms of understanding what is regarded as evidence in this context, this article holds that evidence should be every kind of information and data, that can be contextualized around the policy problem, and has the potential to provide insight to the nature and form of the problem, and thus can potentially assist in drawing appropriate and relevant policy decision interventions.

EBPM is thus increasingly recognized as an effective mechanism by which policy decision making can be improved. In this article, evidence-based policy making is understood as a set of methods/steps that guides policy makers to make well informed policy decisions by using the best available evidence. Here, evidence is viewed as a tool to making informed rational decisions during policy development, and about making policy decisions based on knowing, with an estimated degree of certainty, what works, at achieving which outcomes, for which groups of people, under what conditions, over what time span, and at what costs. The rationale behind EBP is that, decisions should be informed by available evidence, and should include rational analysis, because decisions that are taken based on systematic and strong evidence, are more likely to produce better outcomes. The EBP approach to decision-making seeks to ensure that implementation is successful (Parsons 2002; DPME 2015). Too often decisions are taken and implemented, but the intended results are not met (Makae 2009: 134; Majola 2014: 12; NDP 2011: 417; Tebele 2016: iii; SERI 2011: 63). Focusing on evidence, when making decisions, ensures that development initiatives will directly address the problems identified in society. Evidence-based decision-making approach is therefore seen as mechanism to
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improving public decision making and ultimately improving its implementation (Parsons 2002; Juma & Onkware 2015; Tebele 2016; StatsSA 2019; SAHRC 2014; Komo & Tshiyoyo 2015). It provides for a ‘rigorously objective evidence as a key informant of decisions, but also for improving implementation of public services’ (DPME 2015).

Before the article moves on, it is important to note that EMPM is not without its faults and detractors. Marais and Matebesi (2012), when assessing evidence-based policy development in South Africa, discussed a number of limitations in the use of research to develop policies. They range from consensus on evidence-based process, what constitutes evidence, selective use of evidence, political influence on evidence, whether monitoring and evaluation can provide enough evidence, and the position of research conducted for the sole purpose of informing policy decisions, among others. At the end, Marais and Matebesi (2012: 362) conclude that there’s an acknowledgement that research is still playing a minimal role in policy decision-making in South Africa, and that this is due to

the fact that the goals of policy makers are complex and mostly difficult to test, research is easily labelled as irrelevant, there is seldom consensus in respect of research, there is commonly a range of competing evidence or the existing knowledge is of poor quality.

Similar challenges are raised by other writers (Head 2015; Freiberg & Carson 2010; Bouffard & Reid 2012; Uzochukwu, Onwujeke, Mbachu, Okwuosa, Etiaba, Nyström & Gilson 2016) in other countries. In the assessment of the utilization of evidence for policy development, Head (2015), commences by arguing that government agencies gather and assess a significant amount of information, but there has been little analysis of how this information is utilized for policy and program improvement. Uzochukwu et al. (2016) argue that policy makers and researchers fail to understand the synergy between the two. They view each other as responsible for their own respective outputs instead of them engaging in a continuous process. This kind of behaviour negatively impact on every small chance that may emerge for these practitioners to find each other (Uzochukwu et al. 2016). Freiberg and Carson (2010) interrogates evidence-based policy in criminology in Australia. They argue that evidence alone is unlikely to be the major determinant of policy outcomes and there’s a need for a different kind of evidence-based modelling that will consider other
factors such as emotions, symbols, faith, belief and religion in the criminal justice system. However, Bouffard and Reid (2012) view EBP as a discipline with complexities that needs to be understood before its implemented (Bouffard & Reid 2012: 3). These challenges point to issues with understanding the role of evidence, and the capacity of decision makers and policy implementers to engage with evidence in ways that can have impact.

Case studies on evidence-based policy raises the argument that studying the process alone without looking at the capacity and skills within the institutions is not enough (Marais & Matebesi 2012; Young, Gropp, Pintar, Waddell, Marshall, Thomas, McEwen & Raji 2014). Young et al. (2014: 587-588) submit that developing organizational capacity and individual skills are all key components of the successful adoption and establishment of EIPM (Evidence Informed Policy Making), enhanced education and training in both research and policy realms will be necessary to facilitate EIPM in this sector.

Head (2015) further locates the debate about the use of evidence within the context of improved effectiveness in service delivery and accountability in democratic countries. He argues that democracies and institutions are adopting an evidence-based approach because they are looking for ways to improving their organisational efficiencies and effectiveness in providing services. This in turn can contribute to notions and perceptions of good governance. Prime to challenges in implementing evidence-based policy making is thus the capacity and competencies of policy practitioners to link scientific research, by interpreting the results, with the policy problem. This also extends to capacity to translate and convert the evidence into a solution. Evidence does not solve policy problems, but it provides scientific knowledge which is open to interpretation and relevant for scenario planning (Freiberg & Carson 2010), and thus can provide the basis for more effective public policy decision making.

**Evidence and the COVID-19 Response**

The declaration of a pandemic by the WHO has required governments across the world to respond speedily and effectively. The nature of the pandemic, a health crisis, requiring the implementation of social distancing rules, the
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promotion of washing of hands or disinfecting, and the cessation of economic activities, was always going to have devastating impacts on the socio-economic well-being of communities. The pandemic of 1918, the Spanish Flu, is the only pandemic of similar proportions from which we can consider potential impact and model suitable responses. In other words, the first set of evidence, originates in understanding the potential impact. At the beginning of the pandemic, the evidence of the Spanish Flu, and the knowledge of COVID-19, informed scientists that the impact could possibly be devastating. One of the fundamental mechanisms to combat the virus is based upon the presupposition that all individuals have access, sufficient access, quality access to water.

In order to achieve this, it is important to note that an evidence-based approach becomes more necessary than ever before. The pandemic situation requires rapid responses in the mist of uncertainty, high potential loss, time pressure, and competing values (Yang 2020). Ashtari (2020) argues that the failure to adopt, in many circumstances, evidence-based policies throughout the coronavirus pandemic in the United States resulted to poor response to the pandemic (Ashtari 2020). Governments are seen to be more likely to combat the COVID-19 pandemic if their strategies and policies are rooted and validated by evidence. James (2020) concludes that the effectiveness of countries in managing the COVID-19, will largely depend on government leaders’ reliance on accurate and real-time evidence for their strategies, while engaging the entire society through effective communication of what is at stake and what needs to be done. The COVID-19 outbreak has tested governance systems and proves that collaborative and evidence-based approaches to policy have the potential to shape governance and policymaking at the national and international levels (James 2020).

There are a number of ethical judgments which must be made in achieving this about what is evidence, how should it be used and what the most suitable response should be.

The State of Water Services Policy in South Africa Pre COVID

Following the dawn of democracy in 1994, the new Constitution (The Constitution of the Republic of South Africa, 1996, Act 108 of 1996) has
created new processes, structures, institutions and procedures that serve as mechanisms for public policy formulation in the new constitutional democracy. The Constitution provides that public policy making in South Africa takes place at various government levels, i.e. National, Provincial and Local government levels. This means that there are three policy levels in the South African policy making system (Matshikwe 2004). The national Department of Water and Sanitation is responsible to manage and regulate water supply and sanitation in the country through the development and implementation of appropriate policies. De Coning and Sherwill (2004) summarises the policy development process at the Department of Water and Sanitation by asserting that,

in various workshops with DWAF managers and officials, the remark has often been made that despite having and using almost no theoretical knowledge of policy process models, the water community in South Africa followed a logical, participative, legitimate and otherwise sound process. However, the unplanned nature of the policy process as well as the dominance of the legal drafting process, did impact negatively on the water policy process, notably on the limited time and effort spent on the policy analysis and formulation phase (de Coning & Sherwill 2004).

The Department of Water and Sanitation has recently drafted the departmental Standard Operating Procedures (SOP) for policy development. The aim of the SOP was to create a clear approach and guideline to the development, implementation and management of all DWS departmental policies and to ensure that those members of staff involved are clear as to their roles and responsibilities (DWS 2019).

The new policy context post 1994, provided the basis for the extension of water and sanitation services to citizens who were previously excluded. This new policy context, combined with international funding through the Reconstruction and Development Programme, and shifts in overall government expenditure, provided the context for expanded delivery. Despite early gains in the provision of water post 1994, the provision slowed down notably after 2014 with the percentage of households with access to an improved source of water only increasing by less than five percentage points between 2002 and 2018 (growing from 84,4% to 89,0%). Whilst access to
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Improved sanitation seems to have stagnated at around 80%, and the last 20% seem to be hardest to achieve (General Household Survey 2018). With the latest statistics indicating that 11% of households remain without access to water in the country, South Africa is still battling with the supply of sufficient portable water for all its citizens, especially in informal settlements and rural areas. The typical example is the case of Maluti-A-Phofung Municipality, in QwaQwa, Free State, which continues to experience poor access. Residents in this municipality recently embarked on violent protests, demanding an effective and efficient water supply (SABCNews, February 2020). In eThekwini Metropolitan municipality area, the focus for this article, more than 20,000 households are without access to clean portable water (Ethekwini Municipality IDP 2019/20).

The Water Services Act introduce the logic of the Water Services Authority (WSA), which is defined as any municipality, including a Metro, District or Local council, responsible for ensuring access to water services. Water Services Act and its related policies defines the role of local government (Water Services Authorities) as that of implementation and management of water supply and sanitation services, operation and maintenance of services to residents/consumers, supported by national and provincial government. It is worth noting that, provision of water and sanitation can only be performed by certain municipalities that are classified as Water Services Authorities (WSA). The performance monitoring and regulation of WSA is undertaken by the Department of Water and Sanitation. The principle of cooperative governance is based on the premises that all spheres of government are there to service the citizens as one and work collaboratively in various programmes and policies to achieve a common objective, i.e. development and service delivery. Cooperative governance requires all spheres of government and state organs to inform and consult one another on matters of common interests. In the context of this article, eThekwini Municipality is a WSA.

In addition to the roles and responsibilities identified in the Water Service Act, the priorities of the National Development Plan, which is the guiding document for policy in the country, the South African government has made commitment to water for all, and to invest in evidence-based approaches to policy and decision making (DPME 2015; Langer, Stewart, Erasmus & de Wet 2015). These investments come in a form of partnering with other institutions in building capacity amongst senior officials of government on evidence-based approach (DPME 2015; Paine, Cronin & Sadan 2015). These
investments are made on the logic that evidence shows that policies in South African are hardly or poorly informed by any evidence (Marais & Matebesi 2012; and Paine et al. (2015).

**Key Findings from the Empirical Study**

From the self-administered questionnaire, who were respondents from the WSA, approximately 50% of the respondents indicated that the state of internal policies is ‘effective’, while 38% perceive them as being in a ‘poor’ state, and about 13% being ‘not sure’. The findings from the interviews and self-administered questionnaire reflect that the staff employed to make policy decisions recognize that evidence is important, identify that it is a key element for effective policy, but, are unsure of what evidence should be used. This was reflected when they were given two statements on whether the Department uses evidence to inform policy decisions or uses evidence to support decisions that were already taken by the Department, and respondents in both statements 7% ‘strongly disagree’, 56% are ‘not sure’, and 38% chose to ‘agree’. 88% of Survey respondents from eThekwini Water and Sanitation Department agreed that expert knowledge; stakeholder consultation; previous evaluations; published research; and, values and beliefs all constitute key sources of evidence. However, there was no consensus on the importance of evidence and its use thereof in the policy making process, nor was there understanding of a shared definition of what evidence is. The Department of Water and Sanitation respondents were more explicit in their understanding of evidence. They defined evidence as ranging from site visits, research reports, conducting case studies and evaluation research (D_P 2019; ASD_P 2019). Although most respondents, from the WSA do undertake research (69%), and with about 93% of respondents considering research as important evidence in policy making process, about 38% of respondents undertake research merely to comply with the requirement of filing a research report, while 25% conduct research for purposes of submitting to Council. It is worth noting that none of the respondents share their research outputs with either the Water Research Commission or the Department of Water and Sanitation. The gap between research and policy in this instance is quite visible and potentially has implications for the policy decisions adopted by the municipality, as there is potentially useful evidence emanating from these which could inform the policy making process.
From the eThekwini Municipality’s perspective, there was consensus that evidence is crucial in policy making process and that there should be other documents to be visited, research alone cannot be used as the only evidence, I think some of the documents they use should be visited (AH_WS: 2019).

This point was also supported by another respondent when highlighting that, My understanding policies are a law and if the law is not informed then it means that the law is not gonna be enforceable (PE_WS: 2019).

This assertion was further supported by surveyed respondents from the WSA where 38% of respondents agreeing with this assertion and about 63% strongly agreeing. However, responses on whether the current policy formulation process is informed by evidence, respondents were not convinced that this takes place. The majority formed part of ‘not sure and disagree’ percentage. About 13% disagreed with the statement that the current policy formulation process is informed by evidence, while 57% was not sure, and only 31% agreed that it is informed by evidence. Of significance to note for this article, is that the respondents further indicated that there is a lack of capacity within their units, with some indicating that the most experienced professionals have retired, whilst the new incoming incumbents, who constitute the larger number, being ill experienced and lack institutional memory. Hence, whilst there is common understanding of the multi-sectoral and messiness of the policy process within the sector, respondents lack understanding of the roles and responsibilities of each party in the process. However, the overall findings indicate that there is enough evidence being produced in the sector that remains unutilized to inform policy decisions.

The Policy Response to COVID-19
Based on the need for a rapid response to the pandemic, the Water and Sanitation COVID-19 Command Centre was established and was based at Rand Water in Johannesburg. The Minister responsible for water and sanitation was tasked by the president to ensure that ‘there is water for all communities in order to flatten the curve and to stop the spread of the virus’ (The Presidency,
Media Statement, 7 April 2020). This call challenged the way in which policies related to water provision were being carried out, and it required that policy makers and implementers devise a plan to deliver, quickly, efficiently and to provide a sufficient supply of clean water to those who do not have access. The new policy approach in the sector due to COVID-19, resulted in a change in the role of Municipalities (that are Water Services Authorities). They were redefined from being solely responsible for the provision of water to that of supporting function. Additionally, municipalities needed to ensure the continuous supply of water, including refill of community water tanks and exempting non-paying households by not cutting water supply to their homes.

Fast forward, 100 days after the first case was confirmed, the cumulative number of confirmed COVID-19 cases in South Africa was 61 927, with 3 360 new cases identified on day 99, 1354 deaths and 35008 recoveries. The strategy adopted by Rand Water, the leading delivery agency, was to oversee the procurement, supply and installation of water tanks and tankers to communities without water; ensure up-to-date reporting on water provision across the country (DWS 2020). In addition, the Minister issued an instruction to all municipalities not to cut water supply to non-paying communities, as a mechanism to support the national intervention on ensuring water supply as a means to combat the virus.

According to the KwaZulu-Natal Provincial Command Council, 100 days after the first case of COVID-19 was confirmed in South Africa, a total number of cumulative cases under eThekwini Municipality were 2254 with 1209 recoveries, and 54 fatalities (KZN Provincial Command Council, 13 June 2020). EThekwini Municipality has a significant population living in densely populated informal settlements. With the call for social distancing and improved washing of hands, the City has embarked on an awareness-building campaign in informal settlements to raise awareness around the disease, coupled with the awareness campaign the City has also delivered soaps and sanitizers to vulnerable residents in the informal settlements, community residential units (CRUs). In addition to these, the City also ramped up its provision of water provision by installing in excess of 34 water dispensers, 223 static water tanks and provided more than 130 Chemical toilets (eThekwini Municipality IDP 2020/2021: 652). The question that needs to be answered, is why have these measures to improve access not been employed to allow those in the metro who do not enjoy access? The second question is, if the municipality is able to use the evidence from other countries to inform its
response strategy, why has this approach not been adopted based upon the evidence being generated within the Municipality itself?

In order to effectively apply the regulations and ensure that communities comply with the basic standards of hygiene as a preventative measure, the President made the commitment that,

Emergency water supplies – using water storage tanks, water tankers, boreholes and communal standpipes – are being provided to informal settlements and rural areas.

It is important to note here that this mechanism of providing water to communities, more commonly referred to as Water tinkering, is not a new phenomenon in the South African water sector. The Minister of Water and Sanitation made commitment that 5 000 water tankers will be distributed in the areas experiencing poor water access, as a short-term intervention. By the beginning of June 2020, Rand Water (2020) confidently reported that it has successfully distributed and installed 7594 water tanks in water-stressed communities throughout the country and in addition, supplied more than 350 in schools, and 1320 in transit to schools across the country. Pre COVID-19 water tinkering, has been characterized by a number of challenges. Prime to the challenges are the provision of continuous and uninterrupted supply; inadequate water to cater for the entire community; and overcrowding at water collection points, which was evidenced after the installation of some of these points (Rising Sun October 5 2016). These challenges continued with the inset of the pandemic, and in some many cases wide scale violations of social distancing rules were reported, as the rules of social distancing in themselves did not consider the realities of the poor and marginalized communities, who continue to exist without consistent access to water. This reiterates the idea that policies do not necessarily consider the realities of those for whom the policy has been designed. What is also important to also note is that it has been recently reported that the Water and Sanitation Unit is subject to a fraud and corruption inquiry regarding an estimated R700 million of COVID-19 related funds. Hence, despite on the surface presenting a proactive COVID-19 response, the realities of the system within which the change is required, remains problematic, despite the policy and despite the evidence which is already being produced within the system.
Conclusion
It is undeniable that COVID-19 brought about complexity, challenges and lessons that can be used to shape future public policy responses. Amongst the lessons, for Departments of Water and Sanitation, is to improve monitoring, accountability and implementation systems by centralizing critical functions such as bulk procurement services and using reputable service providers. Effective public policy decision making can only be possible if there are strong intergovernmental relations both horizontal and vertical, irrespective of the amount of evidence available. This requires collaborative planning and implementation in order to realize rapid maximum impact, in addition to legislative support. In the short and long term, the lessons learned, and the evidence generated, through the policy responses to COVID-19 offer opportunity to learn. Whether these learning manifest into changes to policy implementation and result in sustainable and comprehensive positive impact in people access to water, will depend on the decision-making approach adopted, and the political will to support such strategies or reprimand infringements. Whilst the overall response to COVID-19 indicates that interventions based on lessons learnt from similar or same experiences proves to be more successful, and even resulted in a commendation from the World Health Organization, the continuation of such efforts towards more permanent solutions are yet to be seen.

Declaration: This article is adapted from the PhD study of the main author.

References
Birkland, T.A. 2011. An Introduction to Policy Process: Theories, Concepts and Models of Public Policy Making. 3rd Edition. New York: ME Sharpe.
Cairney, P. 2012. Understanding Public Policy: Theories and Issues. New York: Palgrave Macmillan. https://doi.org/10.1007/978-0-230-35699-3
Constitution of the Republic of South Africa, No. 108 of 1996. 1996. Pretoria: Government Printers.
Davies, H.T.O., S.M. Nutley & P.C. Smith 2000. What Works? Evidence Based Policy and Practice in Public Services. Bristol: The Policy Press. https://doi.org/10.2307/j.ctt1t892t3
De Marchi, G., G. Lucertini & A. Tsoukiàs 2014. From Evidence-based Policy
COVID-19 and Water Service Delivery in eThekwini Municipality

Making to Policy Analytics. Springer Science Business Media 236:15 - 38. https://doi.org/10.1007/s10479-014-1578-6

Department of Planning, Monitoring and Evaluation 2010. The Guide to the Outcomes Approach. Pretoria: Department of Planning, Monitoring and Evaluation.

Department of Planning, Monitoring and Evaluation 2014. Evidence-Based Policy-Making and Implementation. Pretoria: Department of Planning, Monitoring and Evaluation.

Department of Planning, Monitoring and Evaluation 2015. Evidence-Based Policy Making and Implementation Executive Course. 28-30 October 2015. The Townhouse Hotel: Cape Town.

Department of Water Affairs and Forestry 2002. National Water Resource Strategy. Pretoria: Government Printers.

Department of Water Affairs 2013. National Water Resource Strategy 3. Pretoria: Government Printers.

Department of Water and Sanitation Water Delivery Newsletter Edition 2. Volume 2. 17 April 2020.

Dicks, L.V., I. Hodge, N.P. Randall, J.P.W. Scharlemann, G.M. Siriwardena, H.G. Smith, R.K. Smith & W.J. Sutherland 2014. A Transparent Process for ‘Evidence-Informed’ Policy Making. Conservation Letters 7,2: 119 - 125. https://doi.org/10.1111/conl.12046

Dye, T.R. 2013. Understanding Public Policy. 14th Edition. New York: Pearson Education Inc.

Freiberg, A. & W.G. Carson 2010. The Limits to Evidence-Based Policy: Evidence, Emotion and Criminal Justice. The Australian Journal of Public Administration 69,2: 152 - 164. https://doi.org/10.1111/j.1467-8500.2010.00674.x

Hammersley, M. 2005. Is the Evidence-Based Practice Movement Doing More Good than Harm? Reflections on Iain Chalmers’ Case for Research-Based Policy Making and Practice. Evidence & Policy 1,1: 85 - 100. https://doi.org/10.1332/1744264052703203

Head, B.W. 2015. Toward More ‘Evidence-Informed’ Policy Making? Public Administration Review 76,3: 472 - 484. https://doi.org/10.1111/puar.12475

Howlett, M. & I. Mukherjee 2017. Handbook of Policy Formulation. Cheltenham: Edward Elgar Publishing. https://doi.org/10.4337/9781784719326
Howlett, M. & M. Ramesh. 1995. *Studying Public Policy: Policy Cycles and Policy Systems*. Canada: Oxford University Press.

Howlett, M. & M. Ramesh 2003. *Studying Public Policy: Policy Cycle and Policy Subsystems*. 2nd Edition. Canada: Oxford University Press.

Howlett, M. 2011. *Designing Public Policy: Principles and Instruments*. New York: Routledge Publishers.

Ile, I., C. Eresia-Eke & C. Allen-Ile 2012. *Monitoring and Evaluation of Policies, Programmes and Projects*. 1st Edition. Pretoria: Van Schaik Publishers.

Intergovernmental Relations Framework Act, No. 13 of 2005. Pretoria: Government Printers.

Ivankova, N.V., J.W. Creswell & V.L. Plano Clark 2007. Foundations and Approaches to University of Technology. *Research Policy* 32.9: 1555 - 1569.

Kalle, J. & H. Ejnavarzala 2016. Moratorium on Genetically Modified Brinjal in India: Is Evidence-Based Policy Making an Adequate Framework? Research and Information System for Developing Countries. *Asian Biotechnology and Development Review* 18.2: 27 - 49.

Komo, S. & M. Tshiyoyo 2015. Improving Public Service Delivery in South Africa: A Case of Administrative Reform. *African Journal of Public Affairs* 8.2: 30 - 42.

Langer, L., R. Stewart, Y. Erasmus & T. de Wet 2015. Walking the Last Mile on the Long Road to Evidence - Informed Development: Building Capacity to Use Research Evidence. *Journal of Development Effectiveness* 7.4: 462 - 470. [https://doi.org/10.1080/19439342.2015.1095783](https://doi.org/10.1080/19439342.2015.1095783)

Lester, J.P. & J. Stewart Jr. 2000. *Public Policy: An Evolutional Approach*. Belmont: Wadsworth/ Thomson Learning.

Lofstedt, R. 2014. A Possible Way Forward for Evidence-Based and Risk-Informed Policy-Making in Europe: A Personal View. *Journal of Risk Research* 17.9: 1089 - 1108. [https://doi.org/10.1080/13669877.2014.919518](https://doi.org/10.1080/13669877.2014.919518)

Majola, M. 2014. *The Implementation of the Government-wide Monitoring and Evaluation System in South Africa: A Provincial Case Study of the KwaZulu-Natal Department of Economic Development and Tourism*. MSocSc Dissertation. University of KwaZulu-Natal.

Makae, I. 2009. *The Impact of Public Policy on Competing Interests: The Case*
COVID-19 and Water Service Delivery in eThekwini Municipality

of the TRP. Masters Public Policy dissertation. University of KwaZulu-Natal.

Marais, L. & Z. Matebesi 2012. Evidence-Based Policy Development in South Africa: The Case of Provincial Growth and Development Strategies. Urban Forum 24: 357 - 371. https://doi.org/10.1007/s12132-012-9179-4

McGregor, S.L.T. & J.A. Murnane 2010. Paradigm, Methodology and Method: Intellectual Integrity in Consumer Scholarship. International Journal of Consumer Studies 34: 419 - 427. https://doi.org/10.1111/j.1470-6431.2010.00883.x

Mihalicza, P., M. Leys, I. Borbás, S. Szigeti, O. Biermann & T. Kuchenmüller 2018. Qualitative Assessment of Opportunities and Challenges to Improve Evidence Informed Health Policy-making in Hungary – an EVIPNet Situation Analysis Pilot. Health Research Policy and Systems 16,50: 1 - 15. https://doi.org/10.1186/s12961-018-0331-z PMid:29914525 PMCid:PMC6006924

Mohamed Sayeed, C.N. & Q. Matha 2019. The Rule of Law as a Pre-requisite for Public Policy Implementation: The Case of Free Basic Water Service Delivery in Ingquza Hill Municipality. Alternation Special Edition 29: 84 - 100. https://doi.org/10.29086/2519-5476/2019/sp29a4

National Planning Commission 2011. National Development Plan 2030 Our Future - Make it Work. Pretoria: Government Printers.

Newman, J. 2018. Debating the Politics of Evidence-based Policy. Book Review Essay. Adelaide: Wiley public administration.

Paine Cronin, G. & M. Sadan 2015. Use of Evidence in Policy Making in South Africa: An Exploratory Study of Attitudes of Senior Government Officials. African Evaluation Journal 3,1: 1 - 10. https://doi.org/10.4102/aej.v3i1.145

Parkhurst, J. 2017. The Politics of Evidence: From Evidence-based Policy to Good Governance of Evidence. Routledge: Routledge Studies in Governance and Public Policy. https://doi.org/10.4324/9781315675008

Parsons, W. 1995. Public Policy: An Introduction to the Theory and Practice of Policy Analysis. Cheltenham: Edward Elgar.

Parsons, W. 2002. From Muddling Through to Muddling Up - Evidence Based Policy Making and the Modernisation of British Government. Public Policy and Administration 17,3: 43 - 60. https://doi.org/10.1177/095207670201700304
Peters, B.G. & P. Zittoun (eds.). 2016. Contemporary Approaches to Public Policy: Theories, Controversies and Perspectives. London: Palgrave Macmillan. https://doi.org/10.1057/978-1-137-50494-4

Peters, S., L. Hopkins & T. Barnett 2016. Education for Children with a Chronic Health Condition: An Evidence-informed Approach to Policy and Practice Decision Making. British Journal of Special Education 43,2: 142 - 158. https://doi.org/10.1111/1467-8578.12130

Punton, M., K. Hagerman, C. Brown, L. Echt, C. Fisher, R. Lloyd, S. Morton & I. Vogel 2016. How can Capacity Development Promote Evidence-informed Policy Making? Literature Review for the Building Capacity to Use Research Evidence (BCURE) Programme. Itad.

Rand Water 2020. Rand Water Intervenes in the Provision of Potable Water Infrastructure to Schools. Media Statement, 1 June 2020.

Sanderson, I. 2002. Evaluation, Policy Learning and Evidence-based Policy Making. Public Administration 80,1: 1 - 22. https://doi.org/10.1111/1467-9299.00292

South African Government News Agency. Evidence-based Policy Making Improves Service Delivery. Thursday, 29 October 2015. Cape Town.

Statistics South Africa 2017. The State of Basic Service Delivery in South Africa: In-depth Analysis of the Community Survey 2016 Data / Statistics South Africa. Pretoria: Statistics South Africa.

Statistics South Africa 2018. General Household Survey 2017. Pretoria: Statistics South Africa.

Strydom, W.F., N. Funke, S. Nienaber, K. Nortje & M. Steyn 2010. Evidence-based Policymaking: A Review. South African Journal of Science 106,5/6: 1 - 8. https://doi.org/10.4102/sajs.v106i5/6.249

Sutcliffe, S. & J. Court. 2005. Evidence-Based Policymaking: What is it? How does it work? What Relevance for Developing Countries? London: Overseas Development Institute, ODI.

UN-Water 2018. Sustainable Development Goal 6: Synthesis Report 2018 on Water and Sanitation. Geneva: UN-Water.

Water Services Act, No. 108 of 1997. Pretoria: Government Printers.

Young, I., K. Gropp, K. Pintar, L. Waddell, B. Marshall, K. Thomas, S.A. McEwen & A. Raji 2014. Experiences and Attitudes Towards Evidence-Informed Policy-making Among Research and Policy Stakeholders in the Canadian Agri-Food Public Health Sector. Blackwell Verlag GmbH Zoonoses and Public Health 61: 581 - 589.
Xaba, S. 2020. *Evidence Based Policy Making as the Alternative for Effective Water Policy Design and Development: A Case Study of eThekwini Metropolitan Municipality*. A PhD Thesis: Public Policy. University of KwaZulu Natal.

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