

**Supplement to:** Pandya S, Kan L, Parr E, Twose C, Labrique AB, Agarwal S. How can community-level data be leveraged to advance primary health care? A scoping review of community-based health information systems. *Glob Health Sci Pract.* 2024;12(2):e2300429. <https://doi.org/10.9745/GHSP-D-23-00429>

## Supplement 1. Scoping Review Search Strategy

### Databases Utilized for Scoping Review Search Strategy

Five databases were utilized to perform the search strategy on November 15, 2021:

- PubMed
- Embase
- Scopus
- Cochrane
- WHO Regional Indexes

### Search Strategy.

The search strategy combined searches for three primary concepts:

- (1) community-based health information systems
  - a. Terms included: *community based health information system, community health monitor, health information system, routine health information system, community health management, performance monitoring, reporting system, community surveillance, health information exchange, community health workers, registers, civil registration and vital statistics*
- (2) low and middle income countries
  - a. Terms included country names as well as: *low and middle income countries, lami countries, less developed countries, less developed economies, deprived countries, lesser developed countries, low gdp, low gnp, low gross domestic, low income countries, middle income countries, lower income countries, poorer countries, under developed countries, under served countries.*

**Supplement 2. List of Included Articles, Country of CBIS Implementation, and Type of CBIS Implementation (n=105 CBIS implementations).**

Author & Year	Country	Type of CBIS
Zaidi <i>et al</i> (2020) <sup>97</sup>	Afghanistan	Digital
Angola, PMI (2021) <sup>73</sup>	Angola	Mixed
Adair <i>et al</i> (2020) <sup>87</sup>	Bangladesh	Mixed
Begum <i>et al</i> (2019) <sup>88</sup>	Bangladesh	Mixed
Hazard <i>et al</i> (2020) <sup>10</sup>	Bangladesh	Mixed
Uddin <i>et al</i> (2019) <sup>89</sup>	Bangladesh	Digital
Benin, PMI (2021) <sup>67</sup>	Benin	Mixed
Benin, USAID (2021) <sup>68</sup>	Benin	Digital
Gilmartin <i>et al</i> (2015) <sup>69</sup>	Burkina Faso	Digital
Burkina Faso, Exemplars in Global Health (2021) <sup>70</sup>	Burkina Faso	Digital
Burma, PMI (2021) <sup>103</sup>	Myanmar (Burma)	Mixed
Oum <i>et al</i> (2005) <sup>91</sup>	Cambodia	Paper
Cambodia, PMI (2021) <sup>92</sup>	Cambodia	Mixed
Mellor <i>et al</i> (2013) <sup>93</sup>	Cambodia	Mixed
Cameroon, PMI (2021) <sup>74</sup>	Cameroon	Mixed
Adair <i>et al</i> (2020) <sup>87</sup>	Colombia	Mixed
Côte d'Ivoire, PMI (2021) <sup>75</sup>	Côte d'Ivoire	Digital
Democratic Republic of Congo (DRC), PMI (2021) <sup>61</sup>	DRC	Mixed
Rubenstein <i>et al</i> (2015) <sup>62</sup>	DRC	Digital
USAID & MCS Program (2019) <sup>39</sup>	DRC	Mixed
USAID & MCS Program (2019) <sup>39</sup>	Egypt	Mixed
Ethiopia, USAID (2019) <sup>102</sup>	Ethiopia	Mixed
Hirvonen <i>et al</i> (2020) <sup>16</sup>	Ethiopia	Paper
Karim <i>et al</i> (2018) <sup>17</sup>	Ethiopia	Paper
Ethiopia, MEASURE Evaluation (2012) <sup>18</sup>	Ethiopia	Paper
University of Washington Global Health Start Program (2014) <sup>24</sup>	Ethiopia	Paper
Ejeta <i>et al</i> (2020) <sup>19</sup>	Ethiopia	Paper
Ethiopia, PMI (2021) <sup>20</sup>	Ethiopia	Mixed
Mengesha <i>et al</i> (2018) <sup>21</sup>	Ethiopia	Digital
Yaya <i>et al</i> (2015) <sup>22</sup>	Ethiopia	Paper
Damtew <i>et al</i> (2013) <sup>23</sup>	Ethiopia	Paper
Ghana, PMI (2021) <sup>63</sup>	Ghana	Mixed
Willcox <i>et al</i> (2019) <sup>64</sup>	Ghana	Digital

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<i>Mutale (2013)</i> <sup>58</sup>	Ghana	Paper
<i>Guinea, PMI (2021)</i> <sup>51</sup>	Guinea	Mixed
<i>Rajvanshi et al (2021)</i> <sup>81</sup>	India	Digital
<i>Peiris et al (2019)</i> <sup>82</sup>	India	Digital
<i>Quraishi (2006)</i> <sup>83</sup>	India	Digital
<i>Thomas et al (2012)</i> <sup>84</sup>	India	Digital
<i>Modi et al (2019)</i> <sup>85</sup>	India	Digital
<i>Nguyen et al (2015)</i> <sup>86</sup>	India	Digital
<i>Rambu Ngana et al (2012)</i> <sup>99</sup>	Indonesia	Paper
<i>Kenya, PMI (2021)</i> <sup>33</sup>	Kenya	Mixed
<i>Regeru et al (2020)</i> <sup>31</sup>	Kenya	Mixed
<i>Jeremie et al (2014)</i> <sup>34</sup>	Kenya	Digital
<i>Kenya, MEASURE Evaluation (2014)</i> <sup>35</sup>	Kenya	Paper
<i>Mushamiri et al (2015)</i> <sup>36</sup>	Kenya	Digital
<i>Liberia, PMI (2021)</i> <sup>76</sup>	Liberia	Mixed
<i>Madagascar, PMI (2021)</i> <sup>77</sup>	Madagascar	Mixed
<i>Amouzou et al (2014)</i> <sup>25</sup>	Malawi	Paper
<i>Blaschke et al (2009)</i> <sup>26</sup>	Malawi	Digital
<i>Konopka et al (2015)</i> <sup>27</sup>	Malawi	Mixed
<i>Malawi, SC4CCM (2013)</i> <sup>28</sup>	Malawi	Digital
<i>Kubalalika (2018)</i> <sup>29</sup>	Malawi	Paper
<i>Malawi, PMI (2021)</i> <sup>30</sup>	Malawi	Mixed
<i>Regeru et al (2020)</i> <sup>30</sup>	Malawi	Mixed
<i>Yourkavitch et al (2016)</i> <sup>32</sup>	Malawi	Paper
<i>Kirk et al (2021)</i> <sup>47</sup>	Mali	Mixed
<i>Mali, PMI (2021)</i> <sup>48</sup>	Mali	Mixed
<i>Stewart et al (2001)</i> <sup>49</sup>	Mali	Digital
<i>Whidden et al (2018)</i> <sup>50</sup>	Mali	Mixed
<i>PMI (2018)</i> <sup>104</sup>	Mozambique	Mixed
<i>Malaria Consortium (2022)</i> <sup>101</sup>	Mozambique	Digital
<i>Mozambique, PMI (2021)</i> <sup>103</sup>	Mozambique	Mixed
<i>Adair et al (2020)</i> <sup>87</sup>	Myanmar (Burma)	Mixed
<i>Oo et al (2021a) **</i> <sup>94</sup>	Myanmar (Burma)	Digital
<i>Oo et al (2021b) **</i> <sup>95</sup>	Myanmar (Burma)	Digital
<i>USAID &amp; MCS Program (2019)</i> <sup>39</sup>	Namibia	Mixed
<i>Niger PMI (2021)</i> <sup>79</sup> <sup>8</sup>	Niger	Mixed
<i>Asangansi et al (2013)</i> <sup>7</sup>	Nigeria	Digital
<i>Nigeria, PMI (2021)</i> <sup>67</sup>	Nigeria	Mixed
<i>Nyangara et al (2018)</i> <sup>52</sup>	Nigeria	Paper
<i>Durrani et al (2019)</i> <sup>98</sup>	Pakistan	Digital
<i>Zaidi et al (2020)</i> <sup>97</sup>	Pakistan	Digital

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<i>Adair et al (2020)</i> <sup>87</sup>	Papau New Guinea	Mixed		
<i>Firth et al (2021)</i> <sup>9</sup>	Papau New Guinea	Mixed		
<i>Hazard et al (2020)</i> <sup>10</sup>	Papau New Guinea	Mixed		
<i>Ashwell et al (2010)</i> <sup>90</sup>	Papau New Guinea	Mixed		
<i>Rwanda, PMI (2021)</i> <sup>79</sup>	Rwanda	Mixed		
<i>Muhoza et al (2021)</i> <sup>71</sup>	Senegal	Mixed		
<i>Senegal, PMI (2021)</i> <sup>72</sup>	Senegal	Mixed		
<i>O'Connor et al (2019)</i> <sup>54</sup>	Sierra Leone	Mixed		
<i>Braa et al (2010)</i> <sup>55</sup>	Sierra Leone	Digital		
<i>Jalloh et al (2020)</i> <sup>56</sup>	Sierra Leone	Digital		
<i>Thomas et al (2019)</i> <sup>57</sup>	Sierra Leone	Mixed		
<i>Byrne et al (2007)</i> <sup>43</sup>	South Africa	Paper		
<i>Odendaal et al (2020)</i> <sup>44</sup>	South Africa	Digital		
<i>Walker et al (2018)</i> <sup>40</sup>	South Africa	Digital		
<i>Igumbor et al (2020)</i> <sup>56</sup>	South Africa	Digital		
<i>Mash et al (2020)</i> <sup>46</sup>	South Africa	Mixed		
<i>Mutale (2013)</i> <sup>58</sup>	Tanzania	Paper		
<i>Tanzania, PMI (2021)</i> <sup>80</sup>	Tanzania	Mixed		
<i>Ramsey et al (2013)</i> <sup>60</sup>	Tanzania	Paper		
<i>Tanzania, MEASURE Evaluation (2014)</i> <sup>59</sup>	Tanzania	Mixed		
<i>Thailand, PMI (2021)</i> <sup>100</sup>	Thailand	Mixed		
<i>Nanyonjo et al (2020)</i> <sup>37</sup>	Uganda	Mixed		
<i>Uganda, Exemplars in Global Health (2021)</i> <sup>38</sup>	Uganda	Digital		
<i>USAID &amp; MCS Program (2019)</i> <sup>39</sup>	Uganda	Mixed		
<i>Walker et al (2018)</i> <sup>40</sup>	Uganda	Digital		
<i>Tumusiime et al (2014)</i> <sup>41</sup>	Uganda	Digital		
<i>Uganda, PMI (2021)</i> <sup>42</sup>	Uganda	Mixed		
<i>Tuan et al (2015)</i> <sup>96</sup>	Vietnam	Mixed		
<i>Flora et al (2017)</i> <sup>5</sup>	Kenya	Mixed		
<i>Hamainza et al (2014)</i> <sup>66</sup>	Zambia	Mixed		
<i>Biemba et al (2017)</i> <sup>6</sup>	Zambia	Mixed		
<i>Zambia, MEASURE Evaluation (2014)</i> <sup>65</sup>	Zambia	Mixed		
<b>Notes:</b>				
* Paper-based CBIS refers to paper-based data collection and reporting; digital CBIS refers to one that has digitized data collection and reporting; a mixed CBIS is one that includes both paper-based and digital tools for data collection and reporting.				
** These two articles reported on the same CBIS implementation.				