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**Shifting To An Exposure Mindset:
How A Strong Trans-disciplinary Approach Can Guide Effective
COVID-19 Response In Informal Settlements In Durban**

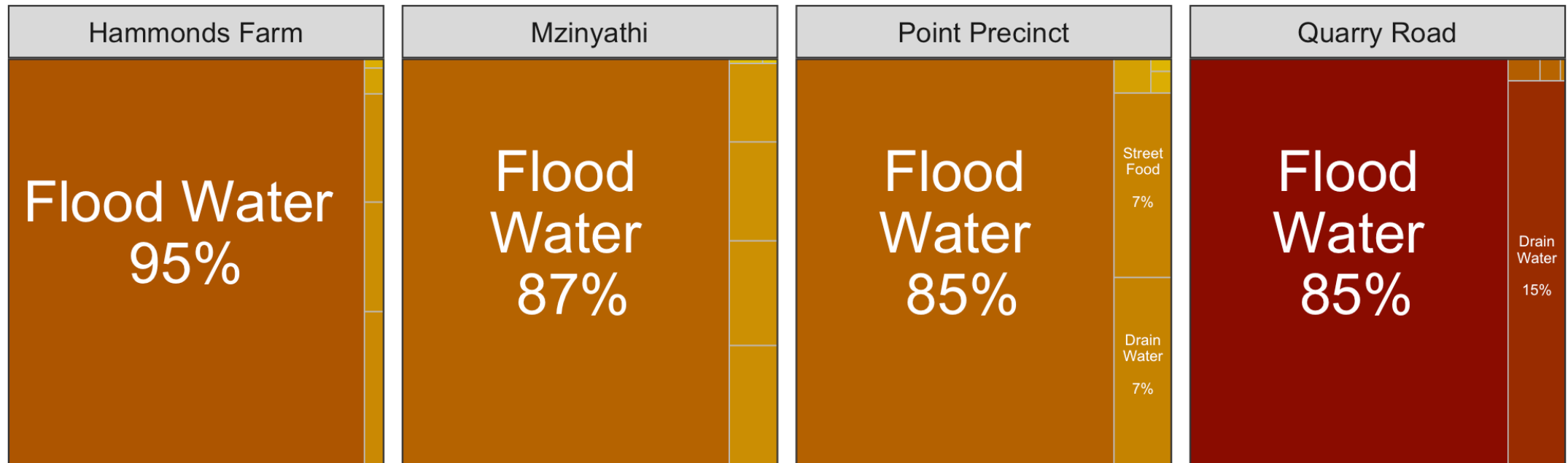


SaniPath: Assessing Public Health Risks

- ☐ SaniPath Exposure Assessment Tool is designed to assess risk related to poor sanitation and to help prioritise sanitation investments based on exposures that have greatest public health impact
- ☐ Combines environmental sample collection and analyses with behavioural data
- ☐ Assesses risk of exposure to faecal contamination in the public domain
- ☐ Developed and tested in multiple countries including India, Bangladesh, Ghana and Zambia
- ☐ In the process of using tool to assess risks in 10 neighbourhoods in Durban

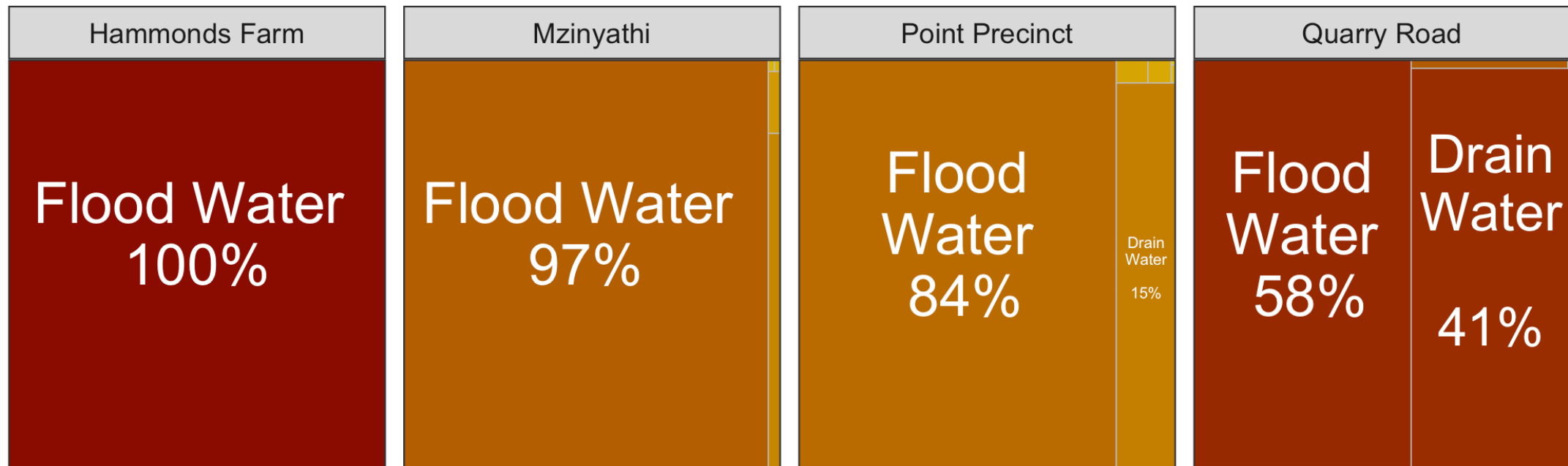


Total Exposure To E.coli: Adults*



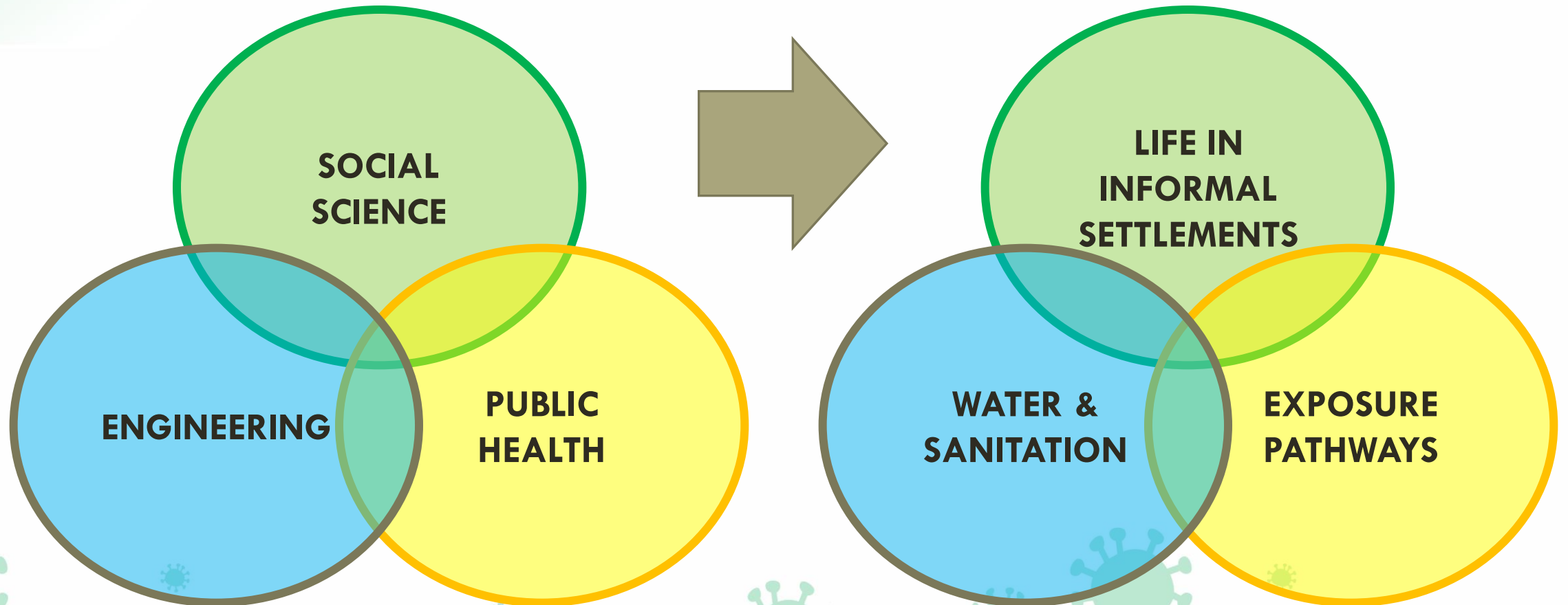
*NOTE: Results are preliminary

Total Exposure To E.coli: Children*

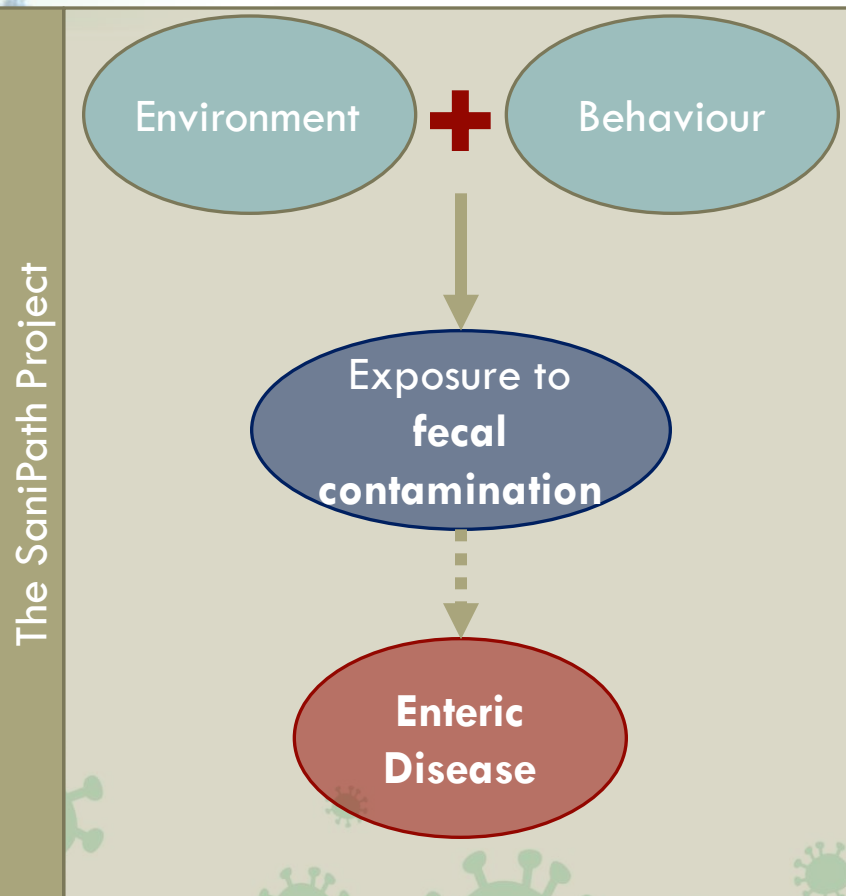


*NOTE: Results are preliminary

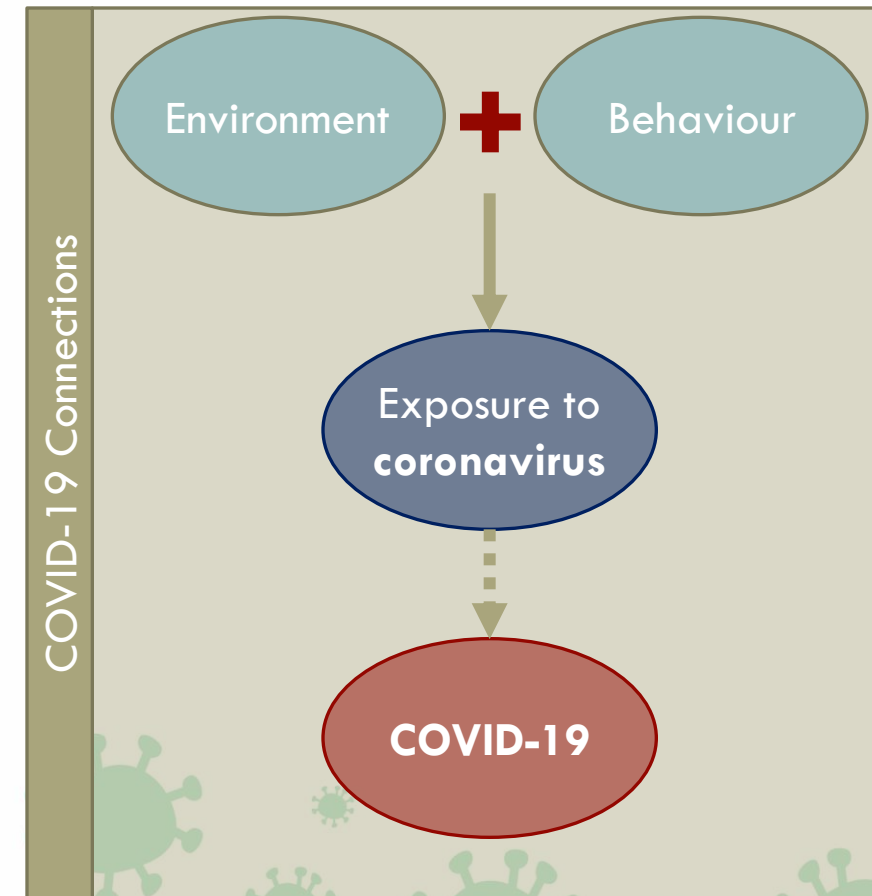
Linking Disciplines



Exposure Mindset: Opportunities For Action




- ❑ For disease to occur, there must be an exposure that leads to disease
- ❑ Exposure is determined by the environment (presence of pathogens, contamination, etc.) and behaviour (actions that bring contact with the environment)
- ❑ To change disease outcomes you must change exposure by altering the environment or behaviour





Key Findings Relevant To COVID-19

- ☐ Swabs around communal ablution blocks (CABs) show little to no E. coli (4/10 samples with detectable levels of E. coli)
 - ☐ Potential hotspot for exposure to COVID-19, and target area for intervention
 - ☐ Frequent and careful cleaning is critical
 - ☐ Caretakers are crucial front-line workers and must be protected
 - ☐ Flood (standing) and drain (flowing) water are high exposure pathways
 - ☐ Increased risk due to increased water usage
 - ☐ Awareness of evidence of waterborne infection necessary
 - ☐ Unsafely managed sanitation (latrine discharge, malfunctioning CAB drainage) could lead to sewage containing COVID-19 to enter open drains and community environment
 - ☐ Fresh produce is a medium risk exposure pathway for adults and children in some communities
 - ☐ Connection between buying fresh produce or street food and interaction with people – handwashing is essential to lower risk
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Importance Of CABs — Opportunities For Reducing Exposure

Changes to environment	Changes to behaviour
CABs open as long as possible	Reduces open defecation; CABs must not become transmission hotspot — queue markers
CABs are clean (chemical supply, PPE)	CABs are clean (caretaker training)
Soap or hand sanitiser available	Handwashing education





WATER USAGE AND DRAINAGE

- ☐ Additional water usage from handwashing – state to provide
- ☐ Adoption of community-built handwashing interventions e.g. TippyTaps, soap dispensers, soakaways
- ☐ Water usage locations may change and spread out
- ☐ Drainage is often poor
- ☐ Increases risks related to other public health issues (e.g. diarrhoeal disease)
- ☐ Needs careful attention for link to COVID-19



Next Steps

- ☐ Working with municipality departments to identify role of state actors e.g. provision of cleaning products, hand sanitiser, reliable water supply
- ☐ Working with community leadership to identify interventions community members can drive e.g. queue markers, methods to promote social distancing, handwashing solutions, clear educational messages
- ☐ Checking that all recommendations are based on sound scientific evidence
- ☐ Testing interventions in real-world settings
- ☐ Working with communities to record, measure and reassess impact of interventions



Why Does It Work?

- ☐ Trans-disciplinary team of experts ensures interventions based on evidence
- ☐ Integration of evidence from a number of research programmes
- ☐ Wide network to bring in additional expertise as required
- ☐ Trans-sectoral partnership ensures interventions are reaching people who need them
- ☐ Trans-sectoral partnership ensures top-down/bottom-up approaches are aligned
- ☐ Trusted network allows quick progress as relationships are already in place



Acknowledgements

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- ☐ eThekweni Municipality: Human Settlements Unit
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- ☐ Iqhaza Lethu team and communities
- ☐ ...and many others