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|  | **Research** | **Evaluation** | **Audit** | **Surveillance** |
| **Purpose** | Derive generalizable new knowledge including studies that aim to generate hypotheses as well as studies that aim to test them. | Designed and conducted solely to define or judge current systems or policy implementation. | Designed and conducted to produce information to inform delivery of system or policy implementation | Designed to manage  outbreak and help the  public by identifying and  understanding risks  associated. |
| **Approach** | Quantitative Research – designed to test a hypothesis  Qualitative research – identifies or explores themes following established methodology | Designed to understand the current state of a given situation | Designed to understand if a specific standard is being met in a situation | Designed to answer:  “What is the cause of this  outbreak?” |
| **Outcome** | Addresses clearly defined questions, aims and objectives | Measures the current state of a given context without reference to a standard | Measures against a standard | Systematic, statistical  methods to allow timely  public health action. |
| **Research Activity** | Quantitative Research – may involve evaluating or comparing various interventions, solutions, or prototypes.  Qualitative Research – usually involves studying how interventions, solutions, prototypes and relationships are experienced. | Involves examining the world as it already exists (including policy interventions or pilots already implemented) and does not involve implementing and measuring new proposed interventions. | Involves examining the world as it already exists and does not involve implementing and measuring new interventions. | May involve collecting  personal data and  samples with the intent  to manage the incident. |
| **Data Source** | May involve the use of existing or routine data but typically will involve collecting additional data to answer a specific question. | Often involves observation, questionnaire or interview in addition to the use of existing data. | May involve observations, questionnaires or interviews in addition to the use of existing data. | May involve analysis of  existing data or administration of  interview or questionnaire to those  exposed. |
| **Study Design** | Quantitative research may involve allocating participants to intervention groups.  Qualitative research uses a clearly defined sampling framework underpinned by conceptual or theoretical justifications. | Participants are not asked to change what they would normally be doing. Instead, the researcher examines what is being done. | Participants are not asked to change what they would normally be doing. Instead, the researcher examines what is being done. | Does not involve an  intervention. No randomisation. |
| **Example** | Quantitative – measuring the effect of one design tool/technique over another  Qualitative – exploring attitudes towards a product or prototype or behaviour change | Contextual observations and questions of a surgeon using a medical device to understand current use and limitations.  Examining how things have changed following implementation of a policy measure/intervention or pilot scheme. | An assessment of whether an office seat, desk and monitor height match specified standards in an office. |  |
| **Ethics Approval Required?** | These studies will typically require approval from ICREC or SETREC or through appropriate means for student work. | Does not require ethical approval. | Does not require ethical approval. | Does not require ethical approval. |