**SUPPLEMENTARY MATERIAL**

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**Table S1:** The PRECISE Working Group

|  |  |
| --- | --- |
| **Institution** | **Members** |
| King’s College London | Peter von Dadelszen, Laura A. Magee, Lucilla Poston, Hiten D. Mistry, Marie-Laure Volvert, Cristina Escalona Lopez, Sophie Moore, Rachel M. Tribe, Andrew Shennan, Tatiana Salisbury, Rachel Craik [also University of Oxford] |
| Aga Khan University, Nairobi | Marleen Temmerman, Angela Koech Etyang, Sikolia Wanyonyi, Geoffrey Omuse, Patricia Okiro, Grace Mwashigadi |
| Centro de Investigação de Saúde de Manhiça | Esperanca Sevene, Helena Boene, Corssino Tchavana, Eusebio Macete, Lazaro Quimice, Sonia Maculuve |
| Eduardo Mondlane University, Maputo | Carla Carrilho |
| Donna Russell Consulting | Donna Russell |
| Imperial College London | Benjamin Barratt |
| London School of Hygiene and Tropical Medicine | Joy Lawn, Hannah Blencowe, Veronique Filippi, Matt Silver |
| Midlands State University | Prestige Tatenda Makanga, Liberty Makacha, Yolisa Dube, Newton Nyapwere, Reason Mlambo |
| MRC Unit The Gambia at LSHTM | Umberto D’Alessandro, Anna Roca, Melisa Martinez-Alvarez, Hawanatu Jah, Brahima Diallo, Abdul Karim Sesay, Fatima Touray, Abdoulie Sillah |
| University of Oxford | Alison Noble, Aris Papageorghiou |
| St George’s, University of London | Judith Cartwright; Guy Whitley, Sanjeev Krishna, Rosemarie Townsend, Asma Khalil |
| University of British Colombia | Marianne Vidler, Joel Singer, Jing (Larry) Li, Jeffrey Bone, Mai-Lei [Maggie] Woo Kinshella, Kelly Pickerill, Ash Sandhu, Domena Tu |
| University of Malawi | William Stones |

**Table S2**: Clinical practice guidelines included in this review

|  |  |  |
| --- | --- | --- |
| **CPG ABBREVIATION** | **YEAR\*** | **CPG FULL NAME AND REFERENCES** |
| **INTERNATIONAL** |  |  |
| WHO | 2011 | World Health Organization 2011 with updates on calcium supplementation to prevent preeclampsia, management of severe hypertension, and timed delivery for severe preeclampsia. (21)(22)(23)(24) |
| SOMANZ | 2014 | Society of Obstetric Medicine of Australia and New Zealand (SOMANZ) 2014 (25) |
| ESC | 2018 | European Society of Cardiology (ESC) 2018 (26) |
| ISSHP | 2018 | International Society for the Study of Hypertension in Pregnancy 2018 (27) |
| **NORTH AMERICA** |  |  |
| Canada (CAN) | 2014 | Society of Obstetricians and Gynaecologists of Canada (SOGC) 2014 with update on antihypertensive therapy in partnership with Hypertension Canada(28,29) |
| United States of America (USA) | 2019 | American College of Obstetricians and Gynecologists (ACOG) 2019 in three publications on gestational hypertension and preeclampsia, chronic hypertension, and the Committee Opinion on emergent therapy of severe hypertension (30)(31)(32) |
| **SOUTH AMERICA** |  |  |
| Brazil (BRA) | 2016 | Sociedade Brasileire de Cardiologia (SBC) 2016 (33) |
| **EUROPE** |  |  |
| France (FRA) | 2016 | French Society of Hypertension (SFH) 2016 (2016 English translation)(34) |
| Ireland (IRL) | 2016 | Institute of Obstetricians and Gynaecologists Royal College of Physicians of Ireland (RCPI) 2016 in two publications about hypertensive disorders and severe preeclampsia and eclampsia (35)(36) |
| The Netherlands (NED) | 2011 | Nederlandse Vereniging voor Obstetrie en Gynaecologie (NVOG) 2011 with updates on BP measurement and aspirin for preeclampsia prevention (37)(38)(39) |
| Germany (DEU) | 2019 | German Society of Gynecology and Obstetrics (DGGG) 2019 (40) |
| United Kingdom (UK) | 2019 | National Institute for Health and Care Excellence (NICE) 2019 (41) |
| Poland (POL) | 2019 | Polish Society of Hypertension (PSH), Polish Cardiac Society and Polish Society of Gynecologists and Obstetricians 2019 (2019 English translation)(42) |
| **AUSTRALASIA** |  |  |
| New Zealand (NZL) | 2018 | Ministry of Health, New Zealand 2018 (43) |
| **AFRICA** |  |  |
| Tunisia (TUN) | 2016 | La Société Tunisienne de Gynécologie Obstétrique (STGO)2016 (44) |

*CPG (clinical practice guideline)*

*\* Year of publication refers to the date of the main document, even if there have been subsequent partial updates of information.*

**Table S3**: Details of search strategy for evidence review, Medline, January 2010-January 2021

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **RISK FACTORS for preeclampsia** | **STUDY METHODOLOGY** | | | **PATIENT SELECTION** | |
| **Umbrella review** | **Systematic review** | **Large observational study** | **Pre-eclampsia** | **Pregnancy or women** |
| **1** | **●** | **●** |  |  | **●** |  |
| **2** | **●** | **●** |  |  |  | **●** |
| **3** | **●** |  | **●** |  | **●** |  |
| **4** | **●** |  | **●** |  |  | **●** |
| **5** | **● (risk factors individually)** |  |  | **●** | **●** |  |
| **6** | **● (risk factors individually)** |  |  | **●** |  | **●** |
| **KEY WORDS** | | | | | | |
|  | 1 Diabetes Mellitus/  2 diabetes mellitus, type 1/ or diabetes mellitus, type 2/  3 Diabetes, Gestational/  4 (diabetes or diabetic).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]  5 Polycystic Ovary Syndrome/  6 polycystic ovar$ syndrome.mp.  7 pcos.mp.  8 maternal age/  9 (maternal age or adolescence or teenager).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]  10 exp Rheumatic Diseases/  11 rheumatic disease$.mp.  12 Antiphospholipid Syndrome/  13 (antiphospholipid syndrome or anti-phospholipid syndrome).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]  14 exp Lupus Erythematosus, Systemic/  15 systemic lupus erythematosus.mp.  16 exp Hypertension/  17 (hypertension or hypertensive or high blood pressure).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]  18 exp Hemoglobinopathies/  19 (H?emoglobinopath$ or thalass?emia or sickle cell or an?emi$ or h?emoglobin c disease).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]  20 exp renal insufficiency/ or kidney failure, chronic/  21 (renal insufficiency or chronic kidney disease or ckd or renal function or chronic renal disease or chronic kidney failure).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]  22 exp Contraception/  23 exp Contraceptive Agents, Female/  24 (contraception or barrier contraception or condom or contraceptive pill or sperm exposure).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]  25 exp Pregnancy, Multiple/  26 multiple pregnanc$.mp.  27 exp Infection/  28 exp Sleep Apnea, Obstructive/  29 (obstructive sleep apnoea or obstructive sleep apnea).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]  30 exp Placenta Diseases/  31 (Placenta$ Disease or placental abruption or intrauterine growth restriction or iugr or still birth or premature delivery or late spontaneous miscarriage).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]  32 Stillbirth/  33 exp Fetal Growth Retardation/  34 (Intrauterine growth restriction or IUGR).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]  35 exp Gestational Weight Gain/ or exp Weight Gain/ or excessive gestational weight gain.mp.  36 exp Down Syndrome/ or exp Trisomy 13 Syndrome/ or exp Trisomy/  37 (down syndrome or fetal trisomy 21 or trisomy 21).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]  38 exp Birth Intervals/  39 (pregnancy interval or inter-pregnancy interval 10 years or interpregnancy interval or inter-pregnancy interval).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]  40 exp Uterine Hemorrhage/ 41 (Uterine Hemorrha\*ge or vaginal bleeding).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]  42 exp Obesity/  43 exp Body Mass Index/  44 (obes$ or bmi or body mass index).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]45 exp Sexual Partners/ or exp Sexual behaviour/  (new partner or change in partner or sexual partner).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]  46 family history.mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]  47 (mother or sister).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]  48 exp Mothers/  49 father.mp. or exp Fathers/  50 paternal.mo. or exp Paternal Inheritance/  51 exp Cardiovascular diseases/  52 (cardiovascular disease or CVD) mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]  53 exp Methamphetamine/ or exp Substance-Related Disorders/ or exp Amphetamine-Related Disorders/ or exp Central Nervous System Stimulants/ or exp Illicit Drugs/   |  | | --- | | 54 (methamphetamine or crystal meth).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]  55 cocaine.mp. or exp Cocaine-Related Disorders/ or exp Cocaine/ or exp Cocaine Smoking/ or exp Crack coaine  56 exp Abortion, Spontaneous/  57 (spontaneous abortion or miscarriage).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]  58 (prior or previous or history of).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]  59 (recurrent miscarriage).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]  60 (same father or same partner or same paternity).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]  61 exp Socioeconomic Factors/ or exp Social class  62 exp Health Status disparities/ or exp “Social Determinants of Health”/ or exp Health Equity/  63 (Socioeconomic status or socioeconomic factors or low socioeconomic status or income social gradient or poverty or social class or socioeconomic or health disparities).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]  64 (Pasifika or Pasefika or pacific islander).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]  65 exp pacific islands/ or exp polynesia/  66 exp Oceanic Ancestry Group/  67 (pacific islands or pacific islanders or maori or polynesia$).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]  68 exp African Continental Ancestry Group/  69 (African).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms] | | Umbrella review or review or reviews or review of systematic reviews or overview of systematic reviews | 1. Meta-Analysis as Topic/  2. meta analy$.tw.  3. metaanaly$.tw.  4. Meta-Analysis/  5. (systematic adj (review$1 or overview$1)).tw.  6. exp Review Literature as Topic/  7. or/1-6  8. cochrane.ab.  9. embase.ab.  10. (psychlit or psyclit).ab.  11. (psychinfo or psycinfo).ab.  12. (cinahl or cinhal).ab.  13. science citation index.ab.  14. bids.ab.  15. cancerlit.ab.  16. or/8-15  17. reference list$.ab.  18. bibliograph$.ab.  19. hand-search$.ab.  20. relevant journals.ab.  21. manual search$.ab.  22. or/17-21  23. selection criteria.ab.  24. data extraction.ab.  25. 23 or 24  26. Review/  27. 25 and 26  28. Comment/  29. Letter/  30. Editorial/  31. animal/  32. human/  33. 31 not (31 and 32)  34. or/28-30,33  35. 7 or 16 or 22 or 27  36. 35 not 34 | 1 Epidemiologic studies/  2 Exp case control studies/  3 Exp cohort studies/  4 Case control.tw.  5 (cohort adj (study or studies)).tw.  6 Cohort analy$.tw.  7 (Follow up adj (study or studies)).tw.  8 (observational adj (study or studies)).tw.  9 Longitudinal.tw.  10 Retrospective.tw.  11 Cross sectional.tw.  12 Cross-sectional studies/  13 Or/1-12 | 1 Pre-Eclampsia/  2 (pre-eclampsia or preeclampsia).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]  3 1 or 2 | 1 Exp Pregnancy/  2 pregnan$.mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]  3 exp Women/  4 (women or woman).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]  5 or/1-4 |

**References**

Please see manuscript bibliography for references corresponding to citations in appendix tables.