NATIONAL BLOOD POLICY:
SAFE AND ADEQUATE BLOOD FOR ALL
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ACKNOWLEDGEMENTS

The Ministry of Health (MoH) gratefully acknowledges the leadership of the Hon. Minister for Health, Kwaku Agyeman-Manu, the Hon, Deputy Ministers for Health, Hon. Tina Mensah and Hon. Bernard Okoe Boye and the Chief Director, Mr. Kwabena Boadu Oku-Afari, under whose leadership this document was developed.

We wish to express our profound gratitude to the former Deputy Minister for Health, Hon. Alexander Abban and the former Chief Director of the Ministry, Nana Kwabena Adjei-Mensah for their immense support.

The Ministry also appreciates the PPBME Directorate (MoH) for coordinating the policy development process and further appreciates the valuable inputs from all the Directors and Unit Heads of the MoH. Furthermore, the MoH acknowledges the efforts of the Chief Executive Officer of the National Blood Service, Dr. Justina Kordai Ansah and her team for providing the needed technical support to the policy development process.

Special thanks also go to the officials of the MoH Agencies who provided valuable inputs/comments towards the enrichment of the document. Other Ministries, Departments and Agencies as well as, the cabinet memo preparation team, professional groups, CSOs and individuals who spent time doing proofreading and providing vital information also deserve special commendations.

(The names of the participating institutions and their representatives are provided under appendix 2)
FOREWORD

The new National Blood Policy, themed “Safe and Adequate Blood for All” is designed to support the Ghana health system to respond to current national needs, and to reflect the incremental changes that have been made. By the end of 2030, the Ministry of Health aspires to achieve Universal Health Coverage (UHC) by ensuring universal access to affordable essential medical services, including blood.

The new National Blood Policy is inspired by the Directive Principles of State Policy as enshrined in the 1992 Constitution of Ghana. It is also aligned to the Coordinated Programme of Economic and Social Development Policies, the overarching health sector policy, the National Health Policy as well as other health sector policy frameworks. The vision of the new National Blood Policy is Safe, adequate and sustainable blood supply for a healthy population. The overall policy objective is to ensure access to safe and adequate blood and blood components and related blood services towards the attainment of universal health coverage in Ghana. The specific objectives of this Policy are:

1. Ensure access to safe and adequate blood and related blood products in Ghana.
2. Strengthen leadership and governance in safe and adequate blood supply.
3. Strengthen strategic partnership and collaboration for safe and adequate blood supply.
4. Ensure financial sustainability of blood services.

It is heartening to note that the new National Blood Policy is borne out of an extensive inter and intra-sectoral consultative meetings with all relevant public and private sector stakeholders. I therefore urge all stakeholders and health professionals to collaborate effectively to support the implementation of the Policy.

Kwaku Agyeman-Manu (MP)
Minister for Health
LIST OF ACRONYMS

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>AfSBT</td>
<td>African Society for Blood Transfusion</td>
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<td>AU</td>
<td>African Union</td>
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<td>BCI</td>
<td>Blood Collection Index</td>
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<td>BSIS</td>
<td>Blood Safety Information System</td>
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<td>BSTAC</td>
<td>Blood Service Technical Advisory Committee</td>
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<td>CHAG</td>
<td>Christian Health Association of Ghana</td>
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<tr>
<td>ECOWAS</td>
<td>Economic Community of West African States</td>
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<td>FDA</td>
<td>Food and Drugs Authority</td>
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<td>HBB</td>
<td>Hospital Blood Banks</td>
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<td>HIV/AIDS</td>
<td>Human Immunodeficiency Virus / Acquired Immunodeficiency Syndrome</td>
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<td>National Blood Transfusion Service</td>
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<td>NCCE</td>
<td>National Commission for Civic Education</td>
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<td>Non-Governmental Organizations</td>
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<td>Primary Health Care</td>
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<td>Public Health and Reference Laboratory</td>
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<td>Sustainable Development Goals</td>
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<tr>
<td>SOPs</td>
<td>Standard Operating Procedures</td>
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<tr>
<td>TTI</td>
<td>Transfusion Transmissible Infection</td>
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<td>UHC</td>
<td>Universal Health Coverage</td>
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<td>WHO</td>
<td>World Health Organization</td>
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CHAPTER ONE

1. INTRODUCTION

1.1 Background

The National Blood Policy was first developed and approved by Cabinet in February 2006 to provide policy direction towards the attainment of a sustainable supply of safe and adequate blood and blood components for transfusion in both public and private health facilities in Ghana.

Considerable progress has been made towards improving blood safety and availability since the development of the first edition of the National Blood Policy. The implementation of the policy has resulted in improved efficiency in blood donor recruitment, selection and retention; blood collection; laboratory testing; component preparation; processing; storage; and distribution. Quality assurance in clinical use of blood has also improved significantly.

In spite of the progress made, there remains formidable challenges in the provision of blood services in the country. In particular, the absence of a legislative framework for blood services have resulted in weak enforcement and compliance to standards of practice in the collection, screening, testing, storage, distribution, and usage of blood and blood components.

Over a decade of implementation, it has become imperative to review the 2006 National Blood Policy to make it relevant and more responsive to the national needs, and to reflect the incremental changes that have been made since the policy was approved.

1.2 Situational Analysis

1.2.1 Nationally Coordinated Blood Programme

A National Blood Transfusion Service (NBTS) was established as a Unit of the Ministry of Health in 1973 to coordinate blood services in the country. The NBTS has since evolved into a National Blood Service (NBS) following the approval of the National Blood Policy by Cabinet in February 2006.
In 2003, the Government of Ghana embarked on the re-organization and modernization of blood services under Component II of the Health Services Rehabilitation Project (HSRP III). As part of the Project, a purpose-built facility for the NBS Headquarters and the Southern Blood Centre was constructed in Accra. The Project supplied major equipment to augment blood donor and laboratory services at the two (2) other Blood Centres that is, Central Blood Centre in Kumasi and the Northern Blood Centre in Tamale. An existing structure at the Tamale Teaching Hospital has been remodeled for the operation of the Northern Blood Centre.

Currently, the National Blood Service operates as an agency of the Ministry of Health comprising a Headquarters and three (3) Blood Centres in Accra, Kumasi and Tamale. A national programme has been initiated to upgrade selected regional hospital blood banks into Blood Distribution Centres to improve access to safe and adequate blood.

1.2.2 Blood Supply and Adequacy

Blood supply in Ghana depends heavily on replacement donations which accounted for about 63% of blood donors in 2018. According to the WHO, voluntary unpaid blood donors from low risk populations who give blood regularly are the foundation of a safe and adequate blood supply. Voluntary unpaid blood donations by the three (3) Blood Centres in Accra, Kumasi and Tamale have been consistently higher than the national average. For instance, in 2017, the percentage of voluntary blood donations recorded by the Blood Centres was 59% compared a national average of 36%. Similarly, in 2018, the Blood Centres recorded 69% voluntary donations against a national average of 37%. Various strategies have been developed to convert family replacement donors to voluntary unpaid blood donors.

Moreover, the blood collection index (BCI) per 1000 population increased from 5.6 in 2017 to 6.0 in 2018. This is below the WHO recommended minimum collection of 10 units per 1,000 population required to meet basic transfusion needs.
1.2.3 Regulation of Blood Services

The Food and Drugs Authority (FDA) is the national body responsible for the regulation of operations and products of Blood Centres and Hospital Blood Banks (HBB). Tools for assessment, guidelines and guidance documents for the regulation of blood components and services have been developed in collaboration with the National Blood Service.

The National Blood Service is responsible for the inspection and accreditation of HBB to receive blood and blood components from Blood Centres for storage and compatibility testing to patients. Blood and blood components have been included in the National Essential Medicines List since October 2017.

1.2.4 Blood Component Preparation

Currently, the National Blood Service processes about 36% of donated whole blood into blood components at two (2) Blood Centres in Accra and Kumasi. The main blood components are Fresh Frozen Plasma, Concentrated Red Cells, Cryoprecipitate and Platelet Concentrate which are distributed to hospitals for component therapy.

Component therapy increases the efficiency of blood therapy, and is critical to the management of severe blood loss such as peripartum haemorrhage, which is a major cause of maternal deaths. The National Blood Service is rolling out plans to promote component therapy in hospitals and also process about 70% of donated blood into components.

Since 2009, the National Blood Service has developed and disseminated guidelines on appropriate clinical use of blood and blood components to prescribers, users and those who manage the administration of blood and blood components in health facilities.

1.2.5 Equitable Access to Safe Blood and Blood Components

There are disparities in access to safe and adequate blood and blood components which is more pronounced in peri-urban and rural communities. A medical drone delivery system has been established by the Ministry of Health in partnership with Zipline International for emergency supply of blood and blood components and other essential medicines to hard-to-reach areas.
1.2.6 Blood Safety and Quality

All donated blood is tested for the four mandatory transfusion transmissible infection (TTIs) recommended by the WHO in a quality assured manner at the three Blood Centres.

The National Blood Service has enrolled onto the step-wise accreditation programme by the African Society for Blood Transfusion (AfSBT). A baseline assessment was completed in June 2018 and measures are being taken to address gaps identified before inviting Assessors for reassessment.

External and internal quality audits are undertaken regularly in the Southern Blood centre to assess the competence of laboratory staff in blood grouping and cross-matching and microbiology screening, with plans to extend to other facilities. A blood safety information system (BSIS) for donor and donation management to improve blood safety and traceability at the Southern and Central Blood Centres. This will be rolled over to the Northern Blood Centre by the end of the year.

Various national policies, guidelines and standard operating procedures (SOPs) relating to blood safety have been developed and reviewed. These include Clinical Blood Transfusion Policy, National Guidelines for Clinical Use of Blood and Blood Components, Standards for the Practice of Blood Transfusion in Ghana, and Blood Donor Selection and Care Manual

1.2.7 Coordination and Regulation of Blood Services

Presently, over 150 hospitals operate their respective hospital-based blood transfusion services with fixed sites for blood collection, screening, testing, processing, storage, distribution and usage across the country without recourse to the National Blood Service. This situation makes it very difficult to effectively coordinate blood services and also ensure quality, safety, adequacy and reliability of blood services nationwide.

The fragmented nature of blood services in Ghana poses formidable challenges for the effective coordination of blood services in health facilities in the absence of a legal framework for enforcing standards for practice and ensuring quality blood service delivery.
1.2.8 Haemovigilance System

A haemovigilance system has been established in two Teaching Hospitals in Accra and Kumasi. A national haemovigilance programme is currently being reviewed to ensure the strengthening and establishment of hospital blood transfusion committees in all facilities that provide blood transfusion therapy and to provide regular feedback and monitoring of blood donor management and clinical transfusion practice. Guidelines and relevant forms for reporting have been developed and available in some health facilities. A haemovigilance database has also been developed and in use.

1.3 Scope of Policy

This policy recognises blood transfusion as a key component of health care. It acknowledges the responsibility of the national blood programme to provide an adequate supply of safe blood for all patients requiring blood transfusion in Ghana. The policy provides a framework and the direction in the delivery of blood services including adequate supply and the rational use of safe blood and blood components in all government, quasi-government, faith-based, and private health facilities nationwide.

1.4 Policy Development and Review Process

This revised policy is the outcome of an extensive stakeholder engagements on the implementation of the national blood programme. The stakeholders included the Ministry of Health and its agencies; Health Service Providers; Consultants in Haematology; Blood Donor Associations; NGOs and Civil Society Organisations involved in voluntary blood donation.

The review process also involved desk reviews and content analysis of related documents by a Task Team constituted by the National Blood Service. In particular, the Task Team undertook a comprehensive analysis of the status of blood services and the critical contributions and weaknesses of the previous policy framework.
1.5  **Content and Structure**

The National Blood Policy is divided into six (6) parts. The first part introduces the policy and gives the rationale, scope, policy process and context. The second part provides an analysis of the situation giving historical background, the achievements, and challenges with the national blood programme.

The third part sets out the policy framework stating the policy goal, objectives, and guiding principles. The strategies to achieve each policy objective are stated in the fourth part. Part five outlines the institutional arrangements for the implementation of the policy, resource mobilisation and the role of other stakeholders.

Part six describes the monitoring and evaluation arrangements for effective implementation and review of the policy. The final part sets out the communication strategy for disseminating the policy to create awareness of the expected roles of stakeholders and also obtain feedback on the performance of the national blood programme under the policy.
CHAPTER TWO

2 POLICY CONTEXTS

2.1 National Policy Context for Blood Services

The overarching policy context for the National Blood Policy is the Directive Principles of State Policy as enshrined in the 1992 Constitution of Ghana which guarantees the right to good health care for people living in Ghana. The revised National Blood Policy is also aligned to the National Development policy framework - as outlined in the Coordinated Programme of Economic and Social Development Policies (2017 – 2024), the overarching health sector policy framework, the National Health Policy, the Health Sector Medium Term Development Plan (2018 – 2021); the National Healthcare Quality Strategy as well as all other related health sector policy and regulatory frameworks.

2.2 Global Policy Context for Blood Services

The revised National Blood Policy is also influenced by conventions and declarations by the international community. These include:

- The 2030 Agenda for Sustainable Development; the International Health Regulations (IHR 2005);
- The Astana Declaration on Primary Health Care (PHC);
- The Melbourne Declaration on 100% Voluntary Non-Remunerated Donation of Blood and Blood Components (2009);
- The Rome Declaration on Achieving Self-Sufficiency in Safe Blood and Blood Products Based on Voluntary Non-Remunerated Donation (2013);
- WHO’s Global Framework for Action Towards 100 Per Cent Voluntary Blood Donation;
- The Africa Union (AU) Vision 2063: “The Africa We Want”;
- The ECOWAS Vision 2020;
CHAPTER THREE

3 NATIONAL BLOOD POLICY FRAMEWORKS

3.1 Vision

To provide safe, adequate and sustainable blood supply for a healthy population

3.2 Policy Goal

The goal of this National Blood Policy is to attain a sustainable national supply of safe blood that relies on 100 per cent voluntary unpaid blood donations in a manner responsive to the needs of patients requiring blood transfusion therapy in both public and private health institutions in Ghana.

To achieve this goal, the Policy aims at strengthening the National Blood Service to increase access to safe, affordable, and quality blood and blood components and related blood services at the highest attainable standards in Ghana.

The overall policy objective is to ensure access to safe and adequate blood and blood components and related blood services towards the attainment of universal health coverage in Ghana. The focus of the Policy is two-fold. That is, adequacy and safety of the national blood supply and related blood services.

3.3 Policy Objectives

1. Ensure access to safe and adequate blood and related blood products in Ghana
2. Strengthen leadership and governance in safe and adequate blood supply
3. Strengthen strategic partnership and collaboration for safe and adequate blood supply
4. Ensure financial sustainability of blood services.
3.4 Guiding Principles

1. **Safety:** Patients requiring blood transfusion have a right to access safe and adequate blood and blood components at the appropriate level of health care.

2. **Volunteerism:** Self-sufficiency in safe blood is best achieved through voluntary unpaid blood donation from low risk populations.

3. **Ethical Standards:** Blood donation and transfusion shall be undertaken in accordance with prescribed ethical standards to be observed with the aim to protect confidentiality, and the safety of the blood donor, patients and staff.

4. **Scarce Resource:** The National Blood Policy recognises that donated blood is a scarce national resource given as a gift to save lives.

5. **Security and Sufficiency:** Security and sufficiency of the national blood supply is necessary for the attainment of universal health coverage.
CHAPTER FOUR

3 STRATEGIES TO ACHIEVE THE KEY OBJECTIVES

1. Ensure access to safe and adequate blood and blood components in Ghana.

Strategies:
- Promote public education on blood donation;
- Increase blood collections from voluntary unpaid blood donors from low risk populations;
- Promote appropriate testing, processing, storage, and distribution of blood and blood components for transfusion;
- Expand blood service infrastructure nationwide;

2. Strengthen leadership and governance in safe and adequate blood and blood product supply.

Strategies:
- Establish comprehensive quality management systems for blood services.
- Provide a national system for haemovigilance.
- Promote the adoption and advancement of appropriate technology for blood services.
- Ensure the quality of tissue, stem cells, umbilical cord blood and their derivatives meant for transplantation to make them safe and prevent their exploitation;
- Promote the safe and appropriate clinical use of blood and blood components and transfusion practices.

3. Strengthen strategic partnership and collaboration for safe and adequate blood and related blood products supply.
Strategies

- Intensify advocacy for voluntary unpaid blood donation;
- Intensify collaboration with religious bodies, educational institutions, corporate organisations, blood donor associations, and other civil society organisations in blood supplies.
- Collaborate with health development partners to improve blood services nationwide

4. Ensure financial sustainability of blood services.

Strategies

- Provide blood and blood components in a cost-effective manner to patients who need them, and in particular the vulnerable groups, without any form of discrimination.
- Intensifying resource mobilization to improve blood services.
- Intensify collaboration with the Ghana Blood Foundation, National Health Insurance Scheme, and other benevolent organisations to provide financial assistance for the vulnerable in need of blood transfusion.
- Blood testing and processing will be centralised at the Blood Centres to benefit from economies of scale and maintain quality;
CHAPTER FIVE

5 IMPLEMENTATION FRAMEWORKS

5.1 Ministry of Health

The Ministry of Health is ultimately responsible for blood safety and adequacy in the country, and securing Government commitment and support for the national blood programme. The implementation of the national blood programme is, however, delegated to the National Blood Service.

5.2 The National Blood Service

The National Blood Service is established as an agency of the Ministry of Health to ensure an effective and coordinated national approach to the provision of safe, adequate and efficacious, blood and blood products, making it timely, accessible and affordable to all patients requiring blood transfusion therapy in both public and private health care institutions in the country.

5.3 Stakeholder Roles

5.3.1 Food and Drugs Authority (FDA)

The FDA is the national blood regulatory authority. Blood and blood components are biologicals obtained from living sources and are intended to cure, mitigate, treat or prevent disease. Blood and blood components are on the Essential Medicine List and regulated by the FDA.

Blood Centres and HBBs are to comply to quality standards by the FDA to ensure safe and efficacious blood and blood components for transfusion.

5.3.2 Hospitals

Hospitals that provide blood transfusion therapy will establish Hospital Blood Banks (HBBs). A HBB will be responsible for patient blood grouping and compatibility testing of processed blood obtained from Blood Centres for transfusion and other immuno-haematological services the hospital may require.
5.3.3 Specialised Units of Teaching Hospitals

The specialised Units/Departments in Teaching Hospitals will in collaboration with the National Blood Service assist in validation and determining of kits used for microbiological screening of transfusion transmissible infections (TTIs) in donated blood and ensuring that the hospital laboratories are accredited, functional and effectively monitored.

5.3.4 Public Health and Reference Laboratory (PHRL)

The PHRL, in collaboration with the National Blood Service, will validate and assist in the determination of kits used for microbiological testing of transfusion transmissible Infections (TTIs) in donated blood.

5.3.5 Noguchi Memorial Institute for Medical Research (NMIMR) and Other Research Institutions

The National Blood Service will collaborate with the NMIMR to carry out research programmes for the development or adaptation of new technologies and for assessment of the real blood needs of the country, and research into any microbes suspected of being transmissible by blood. Other research institutions (national and international) are to be involved as and when necessary.

5.3.6 MOH Agencies

Working relationship will be maintained with relevant divisions of the Ghana Health Service (GHS), Christian Health Associations of Ghana (CHAG), Teaching Hospitals, and other agencies of MOH to foster team work.

5.3.7 Ministries, Departments and Agencies (MDAs)

The Minister of Health will collaborate with the following MDAs for the specified functions below.

The Minister(s) responsible for Education, Youth and Sports will support the sensitisation of blood transfusion science in young children from upper primary through junior high school before they attain the eligible age for donation. In
addition, the Minister(s) will facilitate access to secondary and tertiary institutions for blood collection sessions.

The Minister responsible for Employment will encourage employers in both private and government organisations to donate blood and facilitate access to their work sites for blood donor sessions as well as contribute towards meaningful motivational programmes for employees who contribute significantly to the blood programme.

The Minister(s) responsible for Information and Communication will facilitate the dissemination of information on blood donation to the public.

The Minister responsible for Local Government will encourage Metropolitan, Municipal and District Chief Executives (MMDCEs) to play active roles in the formation and effective functioning of mobile community blood collections in their localities.

The Ghana AIDS Commission will assist through information exchange and financial support.

National Commission for Civic Education (NCCE) will collaborate with the National Blood Service for public education on blood donation.

5.3.8 Health Development Partners

Health Development Partners will be expected to continue to support the implementation of the national blood programme under the guidance of this policy in a harmonised manner to enable Ghana achieve self-sufficiency in safe blood and blood components.

5.3.9 Non-Governmental Organisations (NGOs)

The Ghana Red Cross Society and other non-governmental organisations interested in donor education, recruitment, research and development and handling of blood and blood products shall do so under the guidance of the National Blood Service, using the national protocols developed for the purpose.
5.3.10 Corporate Organisations and Individuals

The National Blood Service will collaborate with corporate organisations and individuals to provide funding, access to workplace for blood donations, technical support, dissemination of information, and motivational packages for voluntary donors.

5.4 Resource Mobilisation

Government will support the National Blood Service in the performance of its functions to ensure operational sustainability. Resources for the implementation of this policy will be sourced through the existing mechanisms of the Ministry of Health and other innovative approaches.

The National Blood Service will plan and budget for the national blood programme in line with approved guidelines of the Medium-Term Expenditure Framework (MTEF).

The National Blood Service shall have its own budget which will be funded from sources comprising:

- Annual budgetary allocation from the Government of Ghana;
- Contributions by Development Partners;
- Internally Generated Funds (through the cost recovery approach);
- Donations by organisations and members of the public;
- Innovative resource mobilisation mechanisms;
- Any other funds that may be approved by the Minister.
CHAPTER SIX

6 MONITORING AND EVALUATION

6.1 M&E Framework

The National Blood Policy is the primary policy document that provides direction for the national blood programme. The policy will be implemented through Short to Medium Term Plans by the National Blood Service.

The National Blood Service will work with the Ministry of Health to provide monitoring and evaluation at all levels within the Monitoring & Evaluation Framework of the Ministry.

6.2 Revision of Policy

This will be done within a reasonable time-period that takes into consideration, the nature, scope and context of the policy.
CHAPTER SEVEN

COMMUNICATION STRATEGY

The National Blood Service will develop and implement a communication strategy to inform and solicit the co-operation of stakeholders for the smooth implementation of the policy. This will include the formal launch of the policy and follow-up media engagements to disseminate information on the policy to the public in a structured manner.

The National Blood Service will also use various fora available at all levels of health service delivery to disseminate the National Blood Policy to health service providers, health development partners, NGOs in Health, Health Professional Associations, other relevant stakeholders and the general public.
### APPENDIX 1

**CONCEPTUAL FRAMEWORK**

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<th>IMPACT</th>
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<td><strong>DESIRED OUTCOMES</strong></td>
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<tr>
<td>• Improved access to safe and adequate blood and blood components</td>
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<tr>
<td>• Improved patient safety through appropriate clinical use of blood and blood products</td>
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<tr>
<td><strong>POLICY OBJECTIVES</strong></td>
<td>To ensure access to safe and adequate blood and related blood products in Ghana</td>
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APPENDIX 2

The following persons were instrumental in the development of the policy

1. Hon. Kwaku Agyeman-Manu - Minister for Health
2. Hon. Tina Mensah - Deputy Minister for Health
3. Hon. Bernard Okoe Boye - Deputy Minister for Health
4. Hon. Alexander Abban - Former Deputy Minister for Health
5. Mr. Kwabena Boadu Oku-Afari - Chief Director, MoH
6. Nana Kwabena Adjei-Mensah - Former Chief Director, MoH
7. Dr. Justina Kordai Ansah - CEO, National Blood Service
8. Dr. Emmanuel Odame - Director, PPBMED MoH
9. Dr. Martha Gyansa-Lutterodt - Director, Technical Coordination, MoH
10. Mr. Ben Nkansah - Director, Infrastructure Directorate, MoH
11. Mr. Hamidu Adakurugu - Director, General Administration, MoH
12. Dr. Kwesi Asabir - Director, HRHD, MoH
13. Dr. Baffour Awuah - Chief Program Officer, Medical & Dental
14. Mr. Benjamin Nyakutsey - Head, Policy Coordination Unit, MoH
15. Dr. Maureen Martey - Head, Resource Mobilization Unit (Bilateral
16. Mr. Daniel Degbotsey - Head, Monitoring and Evaluation Unit, MoH
17. Dr. Ernest Asiedu - Head, Quality Management Unit, MoH
18. Mr. Kwakye Kontor - Head, Budgeting and Planning Unit, MoH
19. Mr. Alex Moffatt - Policy Coordination Unit, MoH
20. Mr. Lucas N. Annan - Policy Coordination Unit, MoH
21. Mr. Daniel Gyan - Focal Person for Cabinet, MoH
22. Dr. Lucy Asamoah-Akuoko - Head, Research and Development, NBS
23. Dr. Michael Ebo Acquah - Head, Clinical Services, NBS
24. Mr. Prince E. Asante - Head, Administration & Support Services, NBS
25. Mr. Murtala Mohammed - Head, Finance, NBS
26. Mr. John O. Tetteh - Training Coordinator, NBS