

118TH CONGRESS
2D SESSION

S. 5222

To require the Secretary of Health and Human Services to implement a pandemic preparedness and response program using artificial intelligence.

IN THE SENATE OF THE UNITED STATES

SEPTEMBER 25, 2024

Mr. ROUNDS (for himself and Mr. HEINRICH) introduced the following bill; which was read twice and referred to the Committee on Health, Education, Labor, and Pensions

A BILL

To require the Secretary of Health and Human Services to implement a pandemic preparedness and response program using artificial intelligence.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “MedShield Act of
5 2024”.

6 **SEC. 2. FINDINGS; SENSE OF CONGRESS.**

7 (a) FINDINGS.—Congress finds as follows:

1 (1) The COVID–19 pandemic revealed the need
2 to better organize pathogen defense of the people of
3 the United States.

4 (2) The National Security Commission on Arti-
5 ficial Intelligence concluded that COVID–19 sci-
6 entific advancements, notably accelerated by the ap-
7 plication of artificial intelligence, in addition to
8 many other existing science and technology initia-
9 tives in the United States, should be used to build
10 a comprehensive, operational, and integrated bio-
11 defense program that functions like a “shield”
12 against manmade and non-manmade pathogens.

13 (b) SENSE OF CONGRESS.—It is the sense of Con-
14 gress that—

15 (1) an initiative such as Operation Warp Speed
16 should not be required for the next pandemic;

17 (2) there is a requirement for a pandemic pre-
18 paredness and response program that would negate
19 the need for a future Operation Warp Speed-like
20 program or a declaration of a public health emer-
21 gency under section 319 of the Public Health Serv-
22 ice Act (42 U.S.C. 247d); and

23 (3) the program established under section 3
24 would operationalize artificial intelligence and a sys-
25 tem-of-systems integration across the interagency

1 and private sector, under the direction of the Sec-
2 retary of Health and Human Services.

3 **SEC. 3. ESTABLISHMENT OF MEDSHIELD PROGRAM.**

4 (a) IN GENERAL.—The Secretary of Health and
5 Human Services (referred to in this Act as the “Sec-
6 retary”) shall implement a pandemic preparedness and re-
7 sponse program utilizing artificial intelligence and other
8 relevant technologies, to be known as the “MedShield pro-
9 gram” (referred to in this Act as the “Program”), in ac-
10 cordance with recommendations of the National Security
11 Commission on Artificial Intelligence. The Program shall
12 operationalize a national medical shield that gathers inno-
13 vations across the public-private ecosystem in the United
14 States, as well as from allies and partners, to improve the
15 efficiency and effectiveness of delivering medical solutions
16 to individuals, functioning as a shield against biological
17 threats. The Program shall continuously operate and mon-
18 itor threats, for the purpose of safeguarding the public
19 health of the United States.

20 (b) PLAN AND INTEGRATION.—Pursuant to the Pro-
21 gram, the Secretary shall—

22 (1) develop a plan to integrate the recommenda-
23 tions of the National Security Commission on Artifi-
24 cial Intelligence for pandemic preparedness and re-
25 sponse, in accordance with the responsibilities of the

1 Department of Health and Human Services as the
2 primary agency and coordinator for the emergency
3 support function relating to public health and med-
4 ical services under the National Response Frame-
5 work of the Federal Emergency Management Agen-
6 cy; and

7 (2) consult with heads of appropriate Federal
8 agencies and select allies and partners to ensure the
9 integration of the Program between relevant depart-
10 ments and agencies and international partners to
11 achieve a coordinated international effort to address
12 a pandemic.

13 (c) UTILIZATION OF ARTIFICIAL INTELLIGENCE.—In
14 carrying out the Program, the Secretary shall leverage ar-
15 tificial intelligence and other relevant technologies and ca-
16 pabilities, including as follows:

17 (1) Development and deployment of a global
18 pathogen surveillance system for the real-time detec-
19 tion and tracking of pathogens.

20 (2) Employment of artificial intelligence en-
21 abled systems to accelerate the identification and de-
22 velopment of effective vaccines.

23 (3) Development and deployment of therapeutic
24 treatments for individuals affected by biological
25 threats.

1 (4) Advanced artificial intelligence-enabled mod-
2 eling to optimize strategies for pathogen tracking,
3 vaccine distribution, and therapeutic interventions.

4 (5) Streamlining and enhancing rapid manufac-
5 turing of vaccines and therapeutics.

6 **SEC. 4. REPORTING.**

7 Not later than 180 days after the date of enactment
8 of this Act, the Secretary shall submit to the Committee
9 on Health, Education, Labor, and Pensions and the Com-
10 mittee on Appropriations of the Senate and the Committee
11 on Energy and Commerce and the Committee on Appro-
12 priations of the House of Representatives a report detail-
13 ing the plan required under section 3(b). Such report shall
14 be submitted in unclassified form, and may include a clas-
15 sified annex.

16 **SEC. 5. DEFINITIONS.**

17 In this Act—

18 (1) the term “artificial intelligence” has the
19 meaning given such term in section 1051(f) of the
20 John S. McCain National Defense Authorization Act
21 for Fiscal Year 2019 (Public Law 115–232; 132
22 Stat. 1962);

23 (2) the term “MedShield” has the meaning
24 given the term “BioShield” in the final report of the
25 Commission submitted under section 1051(c)(2) of

1 the John S. McCain National Defense Authorization
2 Act for Fiscal Year 2019 (132 Stat. 1965; Public
3 Law 115–232); and

4 (3) the term “National Security Commission on
5 Artificial Intelligence” means such commission es-
6 tablished under section 1051 of the John S. McCain
7 National Defense Authorization Act for Fiscal Year
8 2019 (132 Stat. 1962; Public Law 115–232).

9 **SEC. 6. AUTHORIZATION OF APPROPRIATIONS.**

10 For purposes of carrying out the MedShield program,
11 there are authorized to be appropriated to the Secretary—

12 (1) \$300,000,000 for fiscal year 2025;

13 (2) \$350,000,000 for fiscal year 2026;

14 (3) \$400,000,000 for fiscal year 2027;

15 (4) \$450,000,000 for fiscal year 2028; and

16 (5) \$500,000,000 for fiscal year 2029,

17 to remain available until expended.

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